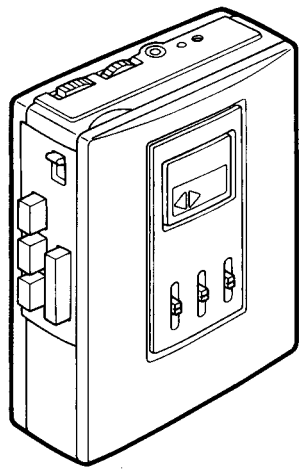
JC-200

SHARP

SERVICE MANUAL/ SERVICE-ANLEITUNG/ MANUEL DE SERVICE

S3126JC-200GY



JC-200(GY)

- In the interests of user-safety the set should be restored to its original condition and only parts identical to those specified be used.
- Im Interesse der Benutzer-Sicherheit sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.
- Dans l'intérêt de la sécurité de l'utilisateur, l'appareil devra être reconstitué dans sa condition première et seules des pièces identiques à celles spécifiées, doivent être utilisées.

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INHALTSVERZEICHNIS

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SHARP CORPORATION

JC-200

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FOR A COMPLETE DESCRIPTION OF THE OPERATION OF THIS UNIT, PLEASE REFER TO THE OPERATION MANUAL.

SPECIFICATIONS

General

Power source:	DC 3 V ["AA" size (UM/SUM-3, R6 or HP-7) battery x 2 or external DC 3V]
Output power: (For European)	MAX; 60 mW (30 mW + 30 mW) (DC operation) RMS; 40 mW (20 mW + 20 mW) (DC operation,DIN 45 324)
Output power: (Except for European)	MAX; 60 mW (30 mW + 30 mW) (DC operation) RMS; 40 mW (20 mW + 20 mW) (DC operation,10% distortion)
Dimensions:	Width; 88 mm (3-7/16") Height; 118 mm (4-5/8") Depth; 34 mm (1-5/16")
Weight:	235 g (8.3 oz) without batteries

Tape deck section

Tape:	Compact cassette tape
Frequency response:	100-10,000 Hz (Normal Tape)
Signal/noise ratio:	54 dB

Headphones

Type:	Over-head(For European and UK) Inner ear(Except for European and UK)
Impedance:	32 ohms(For European and UK) 16 ohms(Except for European and UK)

Specifications for this model are subject to change without prior notice.

NAMES OF PARTS

1. Extra Bass Switch: X-BASS
2. Volume Control
3. Headphones Socket
4. Power/Battery Indicator
5. External DC Power Input Socket
6. Tape Direction Switch: ◀II▶
7. Stop Button: ■
8. Fast Wind Buttons: ◀◀ / ▶▶
9. Play Button: ◀II▶
10. Cassette Compartment
11. Graphic Equalizer Controls
12. Battery Compartment
13. Belt Clip
14. Headphones

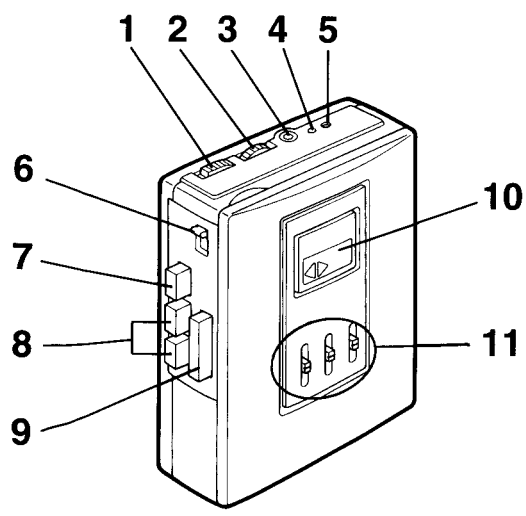


Figure 2-1

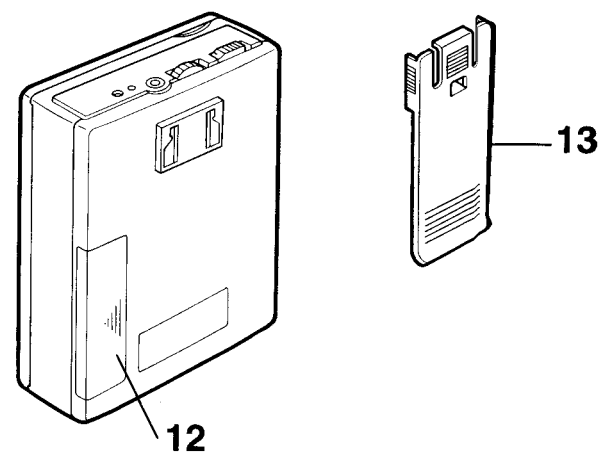
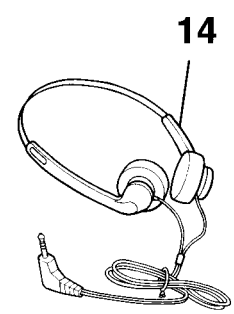
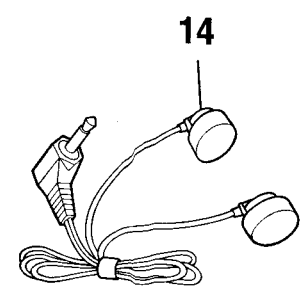


Figure 2-2



For European and UK



Except for European and UK

Figure 2-3

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EINE VOLLSTÄNDIGE BESCHREIBUNG DER BEDIENUNG DIESES GERÄTES IST IN DER BEDIENUNGSANLEITUNG ENTHALTEN.

TECHNISCHE DATEN

Allgemeines

Spannungsversorgung:	Gleichspannung 3 V [Batterie der Größe "AA" (UM/SUM-3, R6 oder HP-7) x 2 bzw.3 V Fremdgleichspannung]
Ausgangsleistung:	MAX; 60 mW (30 mW + 30 mW) (Gleichspannungsbetrieb) Sinusleistung; 40 mW (20 mW + 20 mW) (Gleichspannungsbetrieb, DIN 45 324)
Abmessungen:	Breite; 88 mm Höhe; 118 mm Tiefe; 34 mm
Gewicht:	235g ohne Batterien

Tonbandgeräte-Teil

Band:	Kompaktcassettenband
Frequenzgang:	100 - 10.000 Hz (Normalband)
Rauschabstand:	54 dB

Kopfhörer

Typ:	Kopthörer mit Kopfbügel
Impedanz:	32 Ohm

Die technischen Daten für dieses Modell können ohne vorherige Ankündigung Änderungen unterworfen sein.

Ⓕ

POUR LA DESCRIPTION COMPLÈTE DU FONCTIONNEMENT DE CET APPAREIL, SE REPORTER AU MODE D'EMPLOI.

CARACTÉRISTIQUES

Général

Alimentation:	3 V CC [Pile de format "AA" (UM/SUM-3, R6 ou HP-7) x 2 ou 3V CC externe]
Puissance de sortie:	MAX; 60 mW (30 mW + 30 mW) (Fonctionnement sur CC) RMS; 40 mW (20 mW + 20 mW) (Fonctionnement sur CC, DIN 45 324)
Dimensions:	Largeur; 88 mm Hauteur; 118 mm Profondeur; 34 mm
Poids:	235 g sans piles

Platine

Bande:	Cassette compacte
Réponse en fréquence:	100 - 10.000 Hz (Bande normale)
Rapport signal/bruit:	54 dB

Casque

Type:	Dessus de tête (over-head)
Impédance:	32 ohms

Les caractéristiques de ce modèle sont sujettes à modification sans préavis.

BEZEICHNUNG DER TEILE

1. Extratieftonschalter: X-BASS
2. Lautstärkeregler
3. Kopfhörerbuchse
4. Einschalt-/Batterieanzeige
5. Fremdgleichspannungs-Eingangsbuchse
6. Bandlaufrichtungsschalter: ◀II▶
7. Stopptaste: ■
8. Schnellumspultasten: ◀◀ / ▶▶
9. Wiedergabetaste: ◀▶
10. Cassettenfach
11. Regler des graphischen Equalizers
12. Batteriefach
13. Gürtelhalter
14. Kopfhörer

NOMENCLATURE

1. Commutateur des extra-graves: X-BASS
2. Commande de volume
3. Prise de casque
4. Voyant d'alimentation/piles
5. Prise d'entrée d'alimentation CC extérieure
6. Commutateur de sens de défilement: ◀II▶
7. Touche d'arrêt: ■
8. Touche de bobinage rapide: ◀◀ / ▶▶
9. Touche de lecture: ◀▶
10. Compartiment de cassette
11. Commandes de l'égaliseur graphique
12. Logement de piles
13. Agrafe de ceinture
14. Casque

DISASSEMBLY

Caution on Disassembly
Follow the below-mentioned notes when disassembling the unit and reassembling it, to keep its safety and excellent performance:
1. Take cassette tape out of the unit.
2. Remove the batteries from the unit.
3. After servicing the unit, be sure to rearrange the leads where they were before disassembling.
4. Take sufficient care on static electricity of integrated circuits and other circuits when servicing.

STEP	REMOVAL	PROCEDURE	FIGURE
1	Rear Cabinet	1. Screw .....(A1)x 2	4–1
2	Main PWB	1. Screw .....(B1)x 2	4–2
3	Cassette Holder	1. Open the cassette holder 2. Spring .....(C1)x 1	4–3
4	Mechanism Block	1. Hook .....(D1)x 5 2. Remove the machanism cover 3. Screw .....(D2)x 4	4–4 5–1
5	Graphic Equalizer Unit	1. Screw .....(E1)x 2 2. Holder .....(E2)x 1	5–2

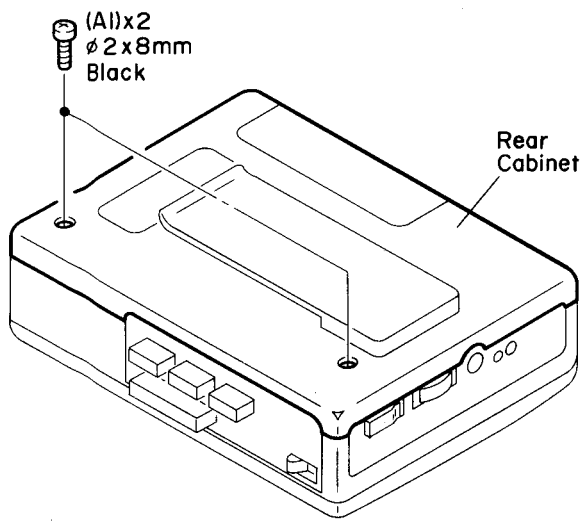


Figure 4–1

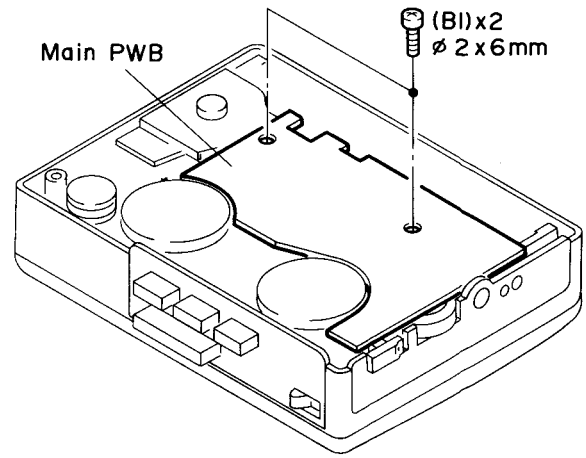


Figure 4–2

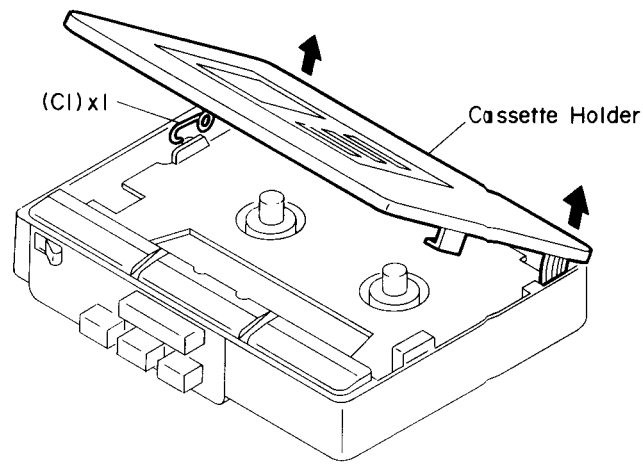


Figure 4–3

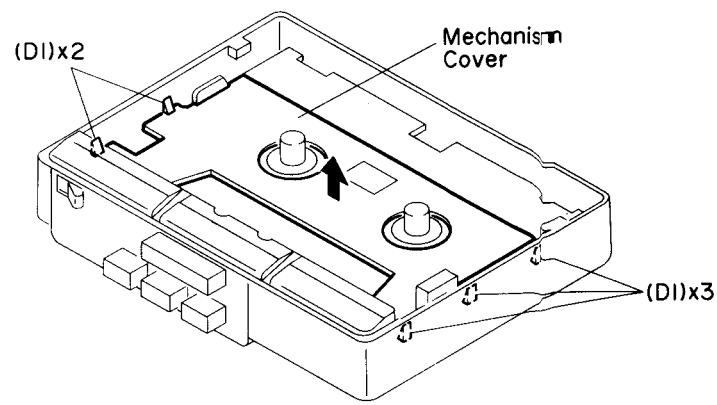


Figure 4–4

Ⓓ ZERLEGEN

Vorsichtsmassregeln Für Das Zerlegen
Beim Zerlegen und Zusammenbauen des Gerätes die folgenden Anweisungen befolgen, um dessen Betriebssicherheit und ausgezeichnete Leistung aufrechtzuerhalten.
1. Die cassette aus dem Gerät entfernen.
2. Unbedingt die Batterien aus dem Gerät entfernen.
3. Nach Warten des Gerätes darauf achten, die Leitungen wieder so zu verlegen, wie sie vor den Zerlegen angeordnet waren.
4. Beim Ausführen von Wartungsarbeiten auf statische Elektrizität der integrierten Schaltkreise und anderen Schaltungen achten.

SCHRITT	ENTFERNEN	VERFAHREN	ABBILDUNG
1	Hintere Gehäusehälfte	1. Schraube ..... (A1)x 2	4–1
2	Hauptleiterplatte	1. Schraube ..... (B1)x 2	4–2
3	Cassettenfach	1. Den Cassettenhalter öffnen 2. Feder ..... (C1)x 1	4–3
4	Laufwerkblock	1. Haken ..... (D1)x 5 2. Die Laufwerkabdeckung entfernen. 3. Schraube ..... (D2)x 4	4–4 5–1
5	Equalizer-Einheit	1. Schraube ..... (E1)x 2 2. Halter ..... (E2)x 1	5–2

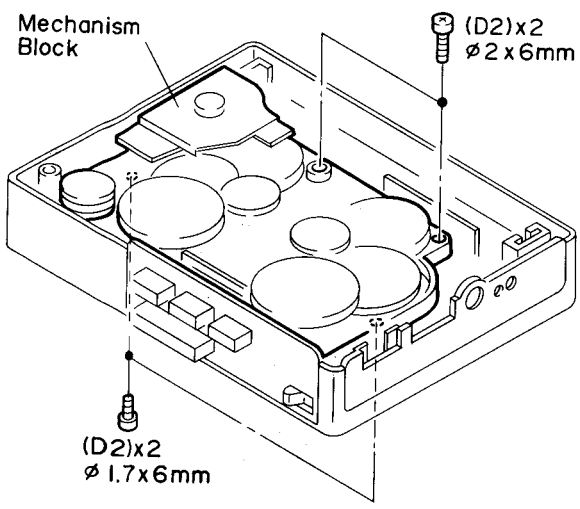


Figure 5–1

Ⓕ DÉMONTAGE

Précautions pour le démontage
Lors du démontage de l'appareil et de son remontage, suivre les précautions ci-dessous, pour maintenir la sécurité et d'excellentes performances.
1. Déposer la bande cassette de l'appareil.
2. S'assurer de retirer les piles de l'appareil.
3. Après la réparation de l'appareil, s'assurer de redisposer les fils tel qu'ils étaient avant le démontage.
4. Faire attention à l'électricité statique des circuits intégrés et des autres circuits lors de la réparation.

ÉTAPE	DÉPOSEL	PROCÉDÉ	FIGURE
1	Coffret arrière	1. Vis ..... (A1)x 2	4–1
2	PMI de principale	1. Vis ..... (B1)x 2	4–2
3	Compartiment de la cassette	1. Ouvrir le du compartiment des piles 2. Ressort ..... (C1)x 1	4–3
4	Bloc du mécanisme	1. Crochet ..... (D1)x 5 2. Enlever le couvercle de mécanisme. 3. Vis ..... (D2)x 4	4–4 5–1
5	Unité d'égaliseur graphique	1. Vis ..... (E1)x 2 2. Porte ..... (E2)x 1	5–2

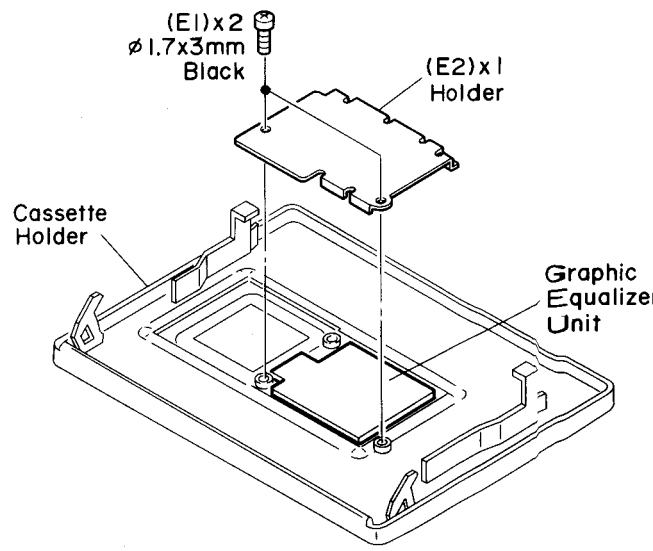


Figure 5–2

Ⓔ REMOVING AND REINSTALLING THE MAIN PARTS

TAPE MECHANISM SECTION

Perform steps 1,2,3 and 4 of the disassembly method to remove the tape mechanism.

How to remove the playback head (See Fig. 6–1.)
1. Remove the tube (A1).
2. Remove the three screws (A2) to remove the playback head.

Note: After replacing the playback head and completing the azimuth adjustment, be sure to apply screwlock.

How to remove the pinch roller (See Fig. 6–2.)
1. Carefully bend the pinch roller pawl in the direction of the arrow Ⓐ ,and remove the pinch roller (B1) upwards.

How to remove the belt (See Fig. 6–3.)
1. Remove the belt (C1).

How to remove the flywheel (See Fig. 6–2,3)
1. Remove the belt (C1).
2. Remove the two stop washers (D1) with a small precision screwdriver to extract the flywheel from the capstan metal.
3. Remove the two washers (D2).

Note: When the stop washer is deformed or damaged, replace it with a new one.

How to remove the motor (See Fig. 6–3.)
1. Remove the belt (C1).
2. Remove the two screws (E1) to remove the motor .

How to reinstall the parts
Install each part in the reverse order of the removal with care.

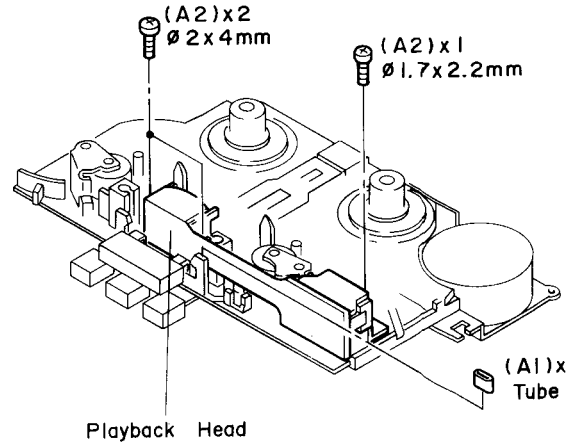


Figure 6–1

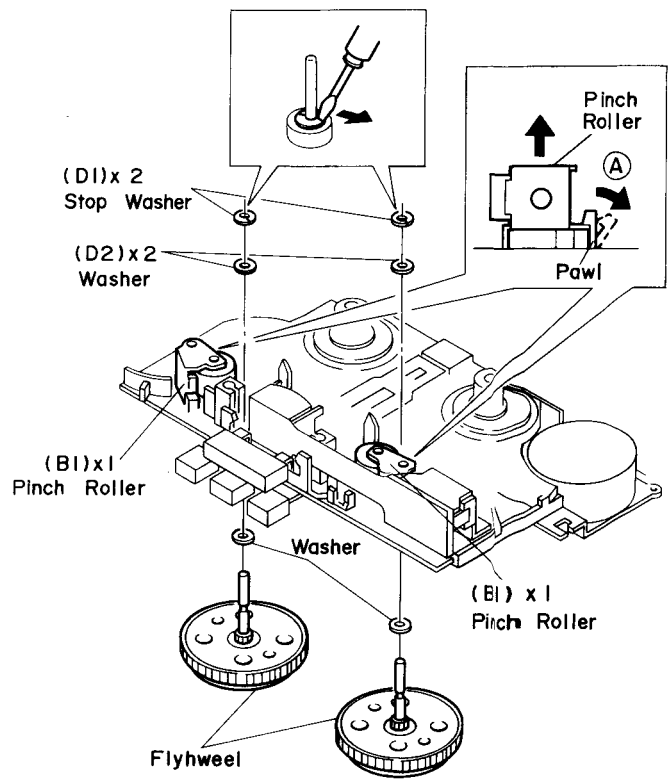


Figure 6–2

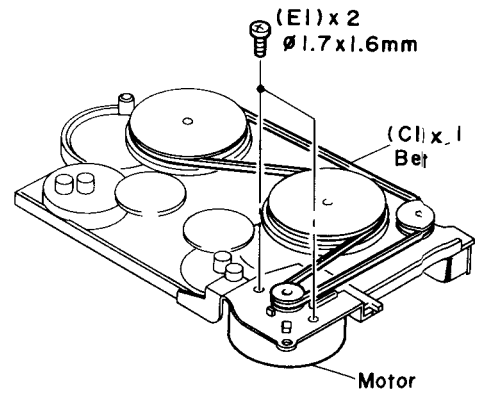


Figure 6–3

Ⓓ

ENTFERNEN UND EINBAUEN DER HAUPTTEILE

BANDMECHANISMUS-TEIL

Zum Entfernen des Bandmechanismus die Schritte 1,2,3 und 4 des Ausbauverfahrens durchführen.

Entfernen den Wiedergabekopfes (Siehe Abb. 6–1.)
1. Die Tube (A1) entfernen.
2. Zum Entfernen des Wiedergabekopfes die drei Schrauben (A2) losdrehen.

Hinweis: Nach dem Auswechseln der Köpfe und Einstellen des Azimuts unbedingt das Schraubensicherungsmittel anwenden.

Entfernen der Andruckrolle (Siehe Abb. 6–2.)
1. Die Andruckrollenklinke in der Pfeilrichtung Ⓐ sorgfältig biegen und die Andruckrolle (B1) nach oben entfernen.

Entfernen des Riemens (Siehe Abb. 6–3.)
1. Den Riemen (C1) entfernen.

Entfernen des Schwungrades (Siehe Abb. 6–2,3)
1. Den Riemen (C1) entfernen.
2. Die zwei Anschlagunterlegscheiben (D1) mit einem kleinen Präzisionsschraubenzieher entfernen, um das Schwungrad aus dem Tonwellenmetall herauzuholen.
3. Die zwei Unterlegscheibe (D2) entfernen.

Hinweis: Wenn die Anschlagunterlegscheibe verformt oder beschädigt ist, diese gegen eine neue auswechseln.

Entfernen des Motor (Siehe Abb. 6–3.)
1. Den Riemen (C1) entfernen.
2. Zum Entfemen des Motor die zwei Schrauben (E1) losdrehen.

Einbauen der Teile
Jedes Teil in der umgekehrter Reihenfolge zur Entfernung sorgfältig einbauen.

Ⓕ

DÉMONTAGE ET REMONTAGE DES PIÈCES PRINCIPALES

MÉCANISME MAGNÉTOPHONE

Effectuer les opérations des étapes 1,2,3 et 4 du démontage pour retirer le mécanisme cassette.

Enlèvement de la tête de lecture (Voir Fig. 6–1.)
1. Enlever le tube (A1).
2. Dévisser la tête de lecture qui est fixée par les trois vis (A2).

Note: Après le remise en place et l'azimutage de la tête, ne pas oublier de verrouiller les vis.

Enlèvement du galet (Voir Fig. 6–2.)
1. Courber attentivement le cliquet du galet dans le sens indiqué par la flèche Ⓐ puis retirer le galet (B1) pardessus.

Enlèvement de la courroie (Voir Fig. 6–3.)
1. Ôter la courroie (C1).

Enlèvement du volant (Voir Fig. 6–2,3)
1. Ôter la courroie (C1).
2. Enlever,avec un tournevis de précision, les deux rondelles d'arrêt (D1) pour retirer le volant du coussinet de cabestan.
3. Enlever les deux rondelles (D2).

Note: Lorsque la rondelle d'arrêt est déformée ou abîmée, il faut la remplace par une neuve.

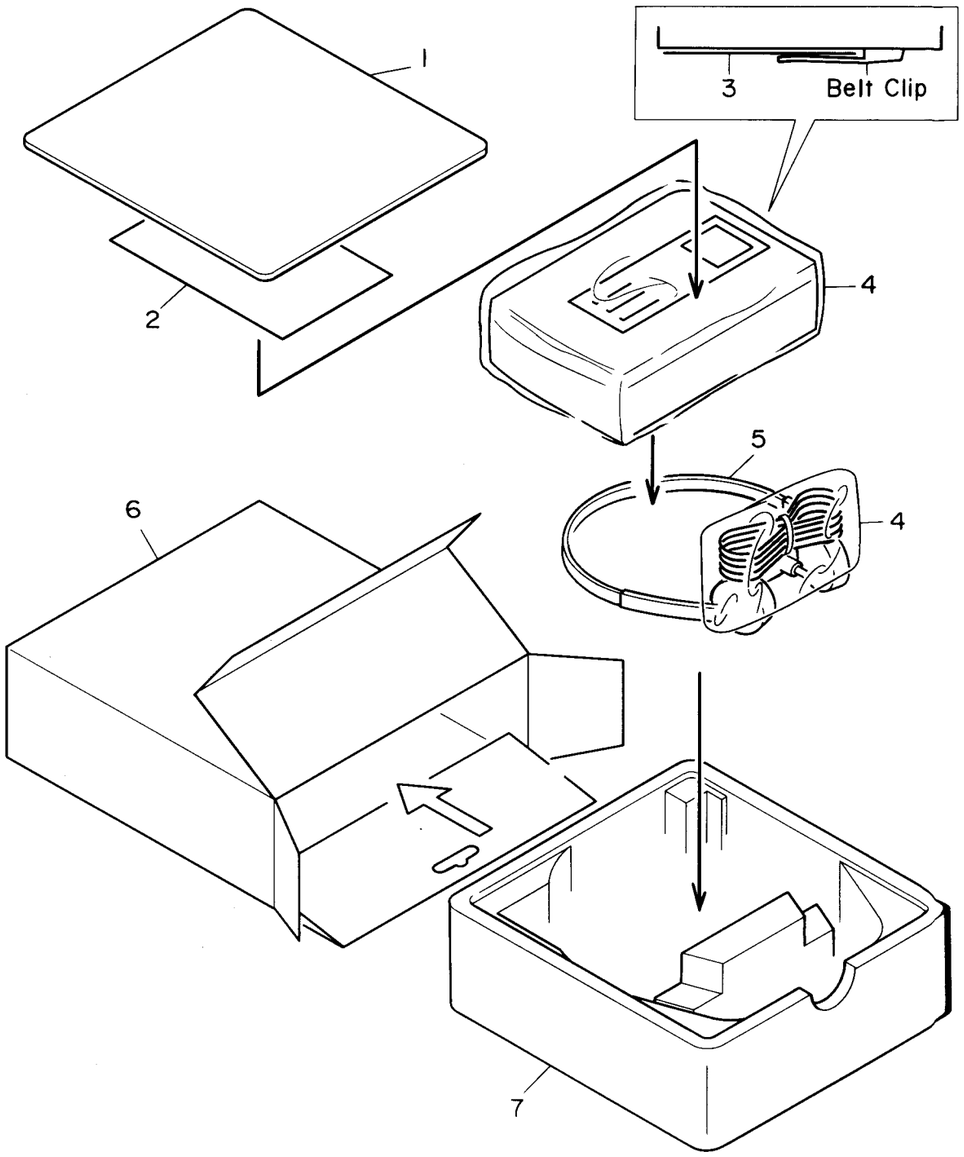
Enlèverment du moteur (Voir Fig. 6–3.)
1. Ôter la courroie (C1).
2. Dévisser le moteur qui est fixé par les deux vis (E1).

Remontage des pièces
Remonter, avec précaution, chaque pièce en faisant l'inverse du démontage.

PACKING METHOD(FOR UK ONLY)

SETTING POSITION OF SWITCHES AND KNOBS	
Volume Control	Minimum
Tape Direction	◀▮▶
Mechanism Button	Stop
X-BASS	Off
Graphic Equalizer	Center

1. Protection Sheet	98F80937820000
2. Operation Manual	98F80937830000
3. Warranty Card	98F80937400000
4. Polyethylen Bag, Unit/Headphones	98F80010077000
5. Headphones	98F15510159101
6. Packing Case	98F81137840000
7. Packing Add.	98F80210047000



Ⓔ ADJUSTMENT

As for adjusting method refer to the relevant explanation in Service Manual "ADJUSTMENT PROCEDURES OF AUDIO PRODUCTS".

MECHANISM SECTION

- **Driving Force Check**

Torque Meter	Specified value
Play: TW-2412	More than(Over) 47 g
Reverse play:TW-2422	More than(Over) 47 g

- **Torque Check**

Torque Meter	Specified value
Play: TW-2111	27 to 55 g.cm
Reverse play: TW-2121	27 to 55 g.cm
Fast forward: TW-2231	More than(Over) 55 g.cm
Rewind: TW-2231	More than(Over) 55 g.cm

- **Head Azimuth**

Test Tape	Instrument Connection
MTT-114	Headphones jack (Load resistance: 32 ohms)

- **Tape Speed**

Test Tape	Adjusting Point	Specified value	Instrument Connection
MTT-111	VR1	3,000 ± 60 Hz	Headphones jack (Load resistance: 32 ohms)

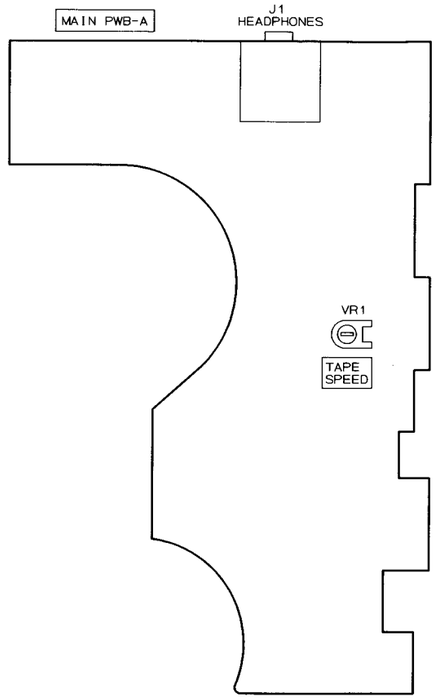


Figure 9–1 ADJUSTMENT POINTS

NOTES ON SCHEMATIC DIAGRAM

- Resistor:
  To differentiate the units of resistors, such symbol as K and M are used: the symbol K means 1000 ohm and the symbol M means 1000 kohm and the resistor without any symbol is ohm-type resistor. Besides, the one with "Fusible" is a fuse type.
- Capacitor:
  To indicate the unit of capacitor, a symbol P is used: this symbol P means micro-micro-farad and the unit of the capacitor without such a symbol is microfarad. As to electrolytic capacitor, the expression "capacitance/withstand voltage" is used.
- The indicated voltage in each section is the one measured by Digital Multimeter between such a section and the chassis with no signal given.
- Schematic diagram and Wiring Side of P.W.Board for this model are subject to change for improvement without prior notice.

REF.NO.	DESCRIPTION	POSITION
SW1	X-BASS	ON - OFF
SW2	MAIN	ON - OFF
SW3	DIRECTION	◀ - ▶

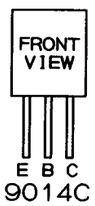


Figure 9–2 TYPES OF TRANSISTOR

Ⓓ EINSTELLUNG

Einzelheiten über das Einstellverfahren sind in den entsprechenden Erklärungen der Service-Anleitung "EINSTELLVERFAHREN FÜR AUDIOPRODUKTE" angegeben.

MECHANISMUS-TEIL

- **Überprüfung der Antriebskraft**

Drehmomentmesser	Vorgeschriebener Wert
Wiedergabe: TW-2412	Mehr als (Über) 47 g
Rücklauf-Wiedergabe: TW-2422	Mehr als (Über) 47 g

- **Überprüfung des Drehmoments**

Drehmomentmesser	Vorgeschriebener Wert
Wiedergabe: TW-2111	27 – 55 g.cm
Rücklauf-Wiedergabe: TW-2121	27 – 55 g.cm
Schnellvorlauf: TW-2231	Mehr als (Über) 55 g.cm
Rückspulung: TW-2231	Mehr als (Über) 55 g.cm

- **Kopfazimut**

Testband	Instrumentenanschluß
MTT-114	Kopfhörer (Belastungswiderstand:32 Ohm)

- **Bandgeschwindigkeit**

Testband	Einstellpunkt	Vorgeschriebener Wert	Instrumentenanschluß
MTT-111	VR1	3.000 ± 60 Hz	Kopfhörer (Belastungswiderstand:32 Ohm)

ANMERKUNGEN ZUM SCHEMATISCHEN SCHALTPLAN

- Widerstände:
  Um die Einheiten der Widerstände unter-scheiden zu können, werden Symbole Wir K und M benutzt. Das Symbol K bedeutet 1000 Ohm und das Symbol M 1 000 Kiloohm; Bei Widerständen ohne Symbol handelt es sich um ohmsche Widerstände. Außerdem sind die mit "Fusible" bezeichneten Widerstände Schmelzsicherungstypen.
- Kondensatoren:
  Zum Bezeichnen der Kondensatoreinheit wird das Symbol P benutzt; dieses Symbol P bedeutet Nanofard. Die Einheit eines Kondensators ohne Symbol ist Mikrofarad. Für Elektrolytkondensatoren wird die Be-zeichnung "Kapazität/Stehspannung" benutzt.
- Die in den einzelnen Teilen angegebenen Spannungen werden mit einem Digitalvielfachmeßgerät zwischen dem betreffen den Teil und dem Chassis ohne Signalzuleitung gemessen.
- Änderungen des schematischen Schaltplans und der Verdrahtungsseite der Leiterplatte für dieses Modell im Sinne von Verbesserungen jederzeit vorbehalten.

Ⓕ RÉGLAGE

Pour la méthode de réglage, se reporter aux indications concernées dans le Manuel de service "PROCEDES DE REGLAGE DES PRODUITS ACOUSTIQUES".

PARTIE MECANISME

- **Vérification de la force d'entraînement**

Torsiomètre	Valeur spécifée
Lecture: TW-2412	Plus de (du haut) 47 g
Lecture d'inversion: TW-2422	Plus de (du haut) 47 g

- **Vérification du couple**

Torsiomètre	Valeur spécifée
Lecture: TW-2111	27 à 55 g.cm
Lecture d'inversion: TW-2121	27 à 55 g.cm
Avance rapide: TW-2231	Plus de (du haut) 55 g.cm
Rebobinage: TW-2231	Plus de (du haut) 55 g.cm

- **Azimut de la tête**

Bande d'essai	Instrument de connexion
MTT-114	Casque (Résistance de charge: 32 ohms)

- **Vitesse de défilement**

Bande d'essai	Point de réglage	Valeur spécifiée	Instrument de connexion
MTT-111	VR1	3.000 ± 60 Hz	Casque (Résistance de charge: 32 ohms)

REMARQUES CONCERNANTLE DIAGRAMME SCHÉMATIQUE

- Résistance:
  Pour différencier les unités de résistances, on utilise des symbole tels que K et M: le symbole K signifie 1000 ohms, le symbole M 1000 Kohms, et la résistance donnée sans symbole est une résistance de type ohm. En outre, celle qui est dotées de "Fusible" est de type à fusible.
- Condensateur:
  Pour indiquer l'unité de condensateur, on utilise le symbole P; ce symbole P signifie micro-microfarad, et l'unité de condensateur donnée sans ce symbole est le microfarad. En ce qui concerne le condensateur électrolytique, on utilise l'expression "tension de régime/capacité".
- La tension indiquée dans chaque section est celle mesurée par un multimètre numérique entre la section en question et le châssis, en l'absence de tout signal.
- Le diagramme schématique et le côté câblage de la PMI de ce modèle sont sujets à modifications sans préavis pour l'amélioration de ce produit.

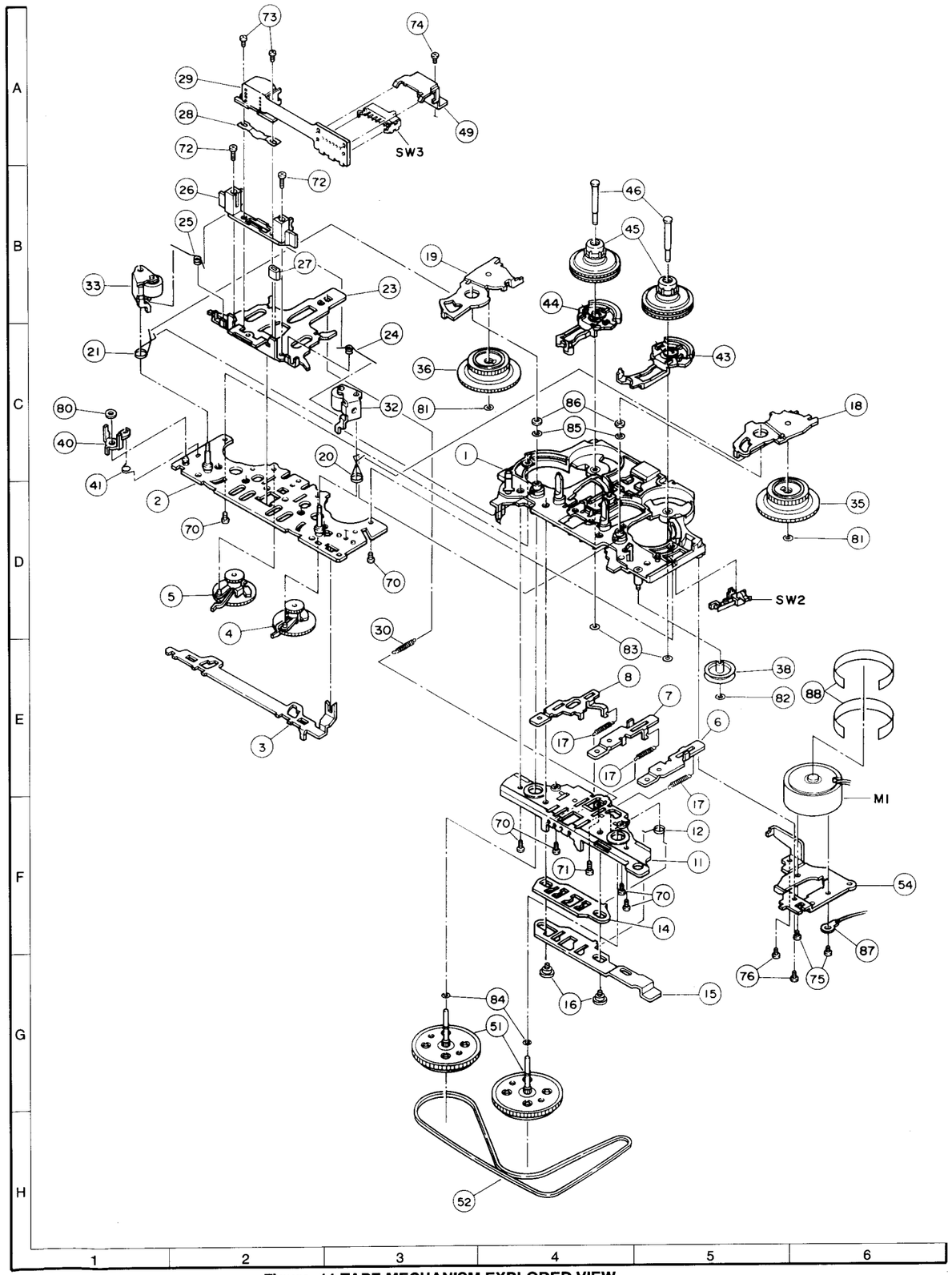


Figure 11 TAPE MECHANISM EXPLODED VIEW

JC-200

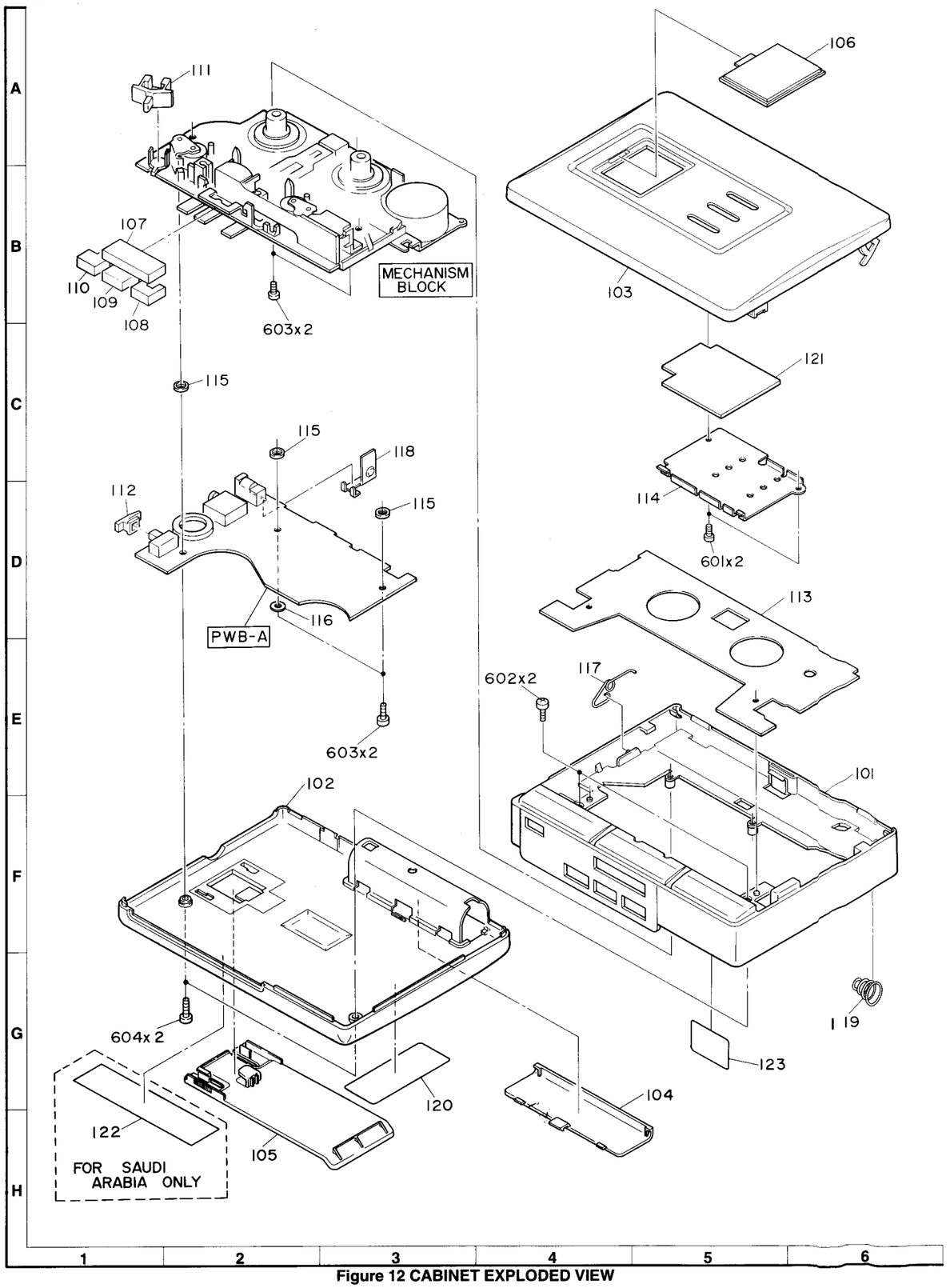


Figure 12 CABINET EXPLODED VIEW

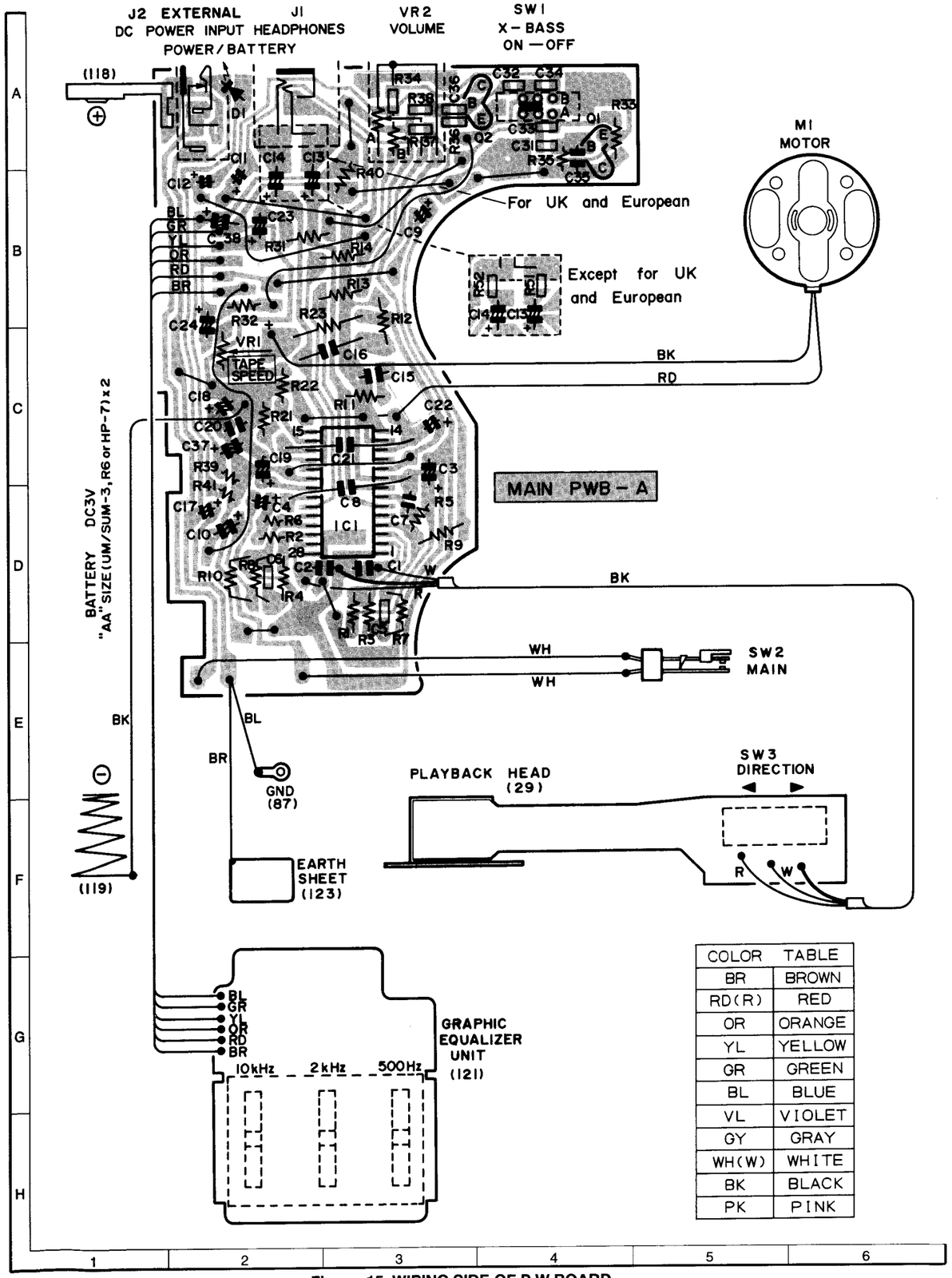
Playback Signal

MAIN PWB-A

PLAYBACK HEAD
Rch
Lch
C2 0.001
C1 0.001
R2 For UK and European:180 Except for UK and European:120
C4 33/10
R6 68K
C6 0.022
R4 6.8K
R8 100K
R10 2.2K
C10 0.1/50
VR2-B 10K(A) VOLUME
R14 1K
C12 1/50
C8 330P
C19 220/6.3
C20 0.02
C18 220/6.3
C16 0.1
R12 33
R21 2.2K
C14 100/4
TAPE SPEED
VR1 500(B)
R23 0.47
R22 820
C21 0.001
MOTOR
N.C
PRE
POWER
VCC
IN 2
BIAS CONTROL
IC1
MM1037
PRE POWER AMP. / SPEED CONTROL
R1 For UK and European:180 Except for UK and European:120
R3 6.8K
R7 100K
C5 0.022
C3 33/10
R5 68K
C17 100/4
C9 0.1/50
R9 2.2K
C7 330P
R11 33
C15 0.1
R13 1K
VR2-A 10K(A) VOLUME
C13 100/4
C11 1/50
C22 1/50
For UK and European
R51 5.6
Except for UK and European
R39 1K
Except for UK and European
+B
SW2 MAIN
J2 EXTERNAL DC POWER INPUT
BATTERY DC 3V
"AA" SIZE(UM/SUM-3, R6 or HP-7)×2
R41 330
D1 POWER/BATTERY TLR124
J1 HEADPHONES
C37 100/4
C38 100/4
R40 1.5K
C23 1/50
C24 1/50
Lch OUT
Lch IN
Rch OUT
Rch IN
GND
GRAPHIC EQUALIZER UNIT
X-BASS SW1-A
X-BASS SW1-B
ON
OFF
R31 27K
R37 3.9K
R38 3.9K
R32 27K
C31 0.047
R35 220K
C32 0.047
R36 220K
C33 0.022
C35 680P
C34 0.022
C36 680P
R33 27K
Q1 9014C
X-BASS
R34 27K
Q2 9014C
X-BASS

Ⓔ • NOTES ON SCHEMATIC DIAGRAM can be found on page 9,10. Ⓓ • ANMERKUNGEN ZUM SCHEMATISCHEN SCHALPLAN stehen auf Seite 9,10. Ⓕ • REMARQUE CONCERNANT LE DIAGRAMME SYNOPTIQUE sont indiqués à la page 9,10.

Figure 13 SCHEMATIC DIAGRAM



COLOR	TABLE
BR	BROWN
RD(R)	RED
OR	ORANGE
YL	YELLOW
GR	GREEN
BL	BLUE
VL	VIOLET
GY	GRAY
WH(W)	WHITE
BK	BLACK
PK	PINK

Figure 15 WIRING SIDE OF P.W.BOARD

REPLACEMENT PARTS LIST

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following information.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION

★MARK: SPARE PARTS-DELIVERY SECTION

REF.NO.	PART NO.	★	DESCRIPTION	CODE
			INTEGRATED CIRCUIT	
IC1	VHiMM1037//-1	J	Pre Power Amp./Tape Speed Control,MM1037	A L
			TRANSISTORS	
Q1,2	98F110219014C0	J	Silicon,NPN,9014 C	A A
			DIODE	
D1	98F11510112001	J	LED,Red,TLR124	A C
			CONTROLS	
VR1	98F12710264800	J	500 ohms (B),Semi-VR [Tape Speed]	A B
VR2	98F12610119401	J	10 kohm (A)×2 [Volume]	A G
			CAPACITORS	

There are two types of capacitors available and they can be identified from each other by reading their Part Numbers.

・Ceramic type capacitor;
A symbol "C" or "K" is given at the 3rd digit of its Part Number like "VCC (or K)……J."

・Semiconductor type capacitor:
A symbol "T" is given at the 3rd digit of its Part Number like "VCT……J."

The capacitance error of each capacitor is indicated by the symbol given at the 13th digit of the Part Number as follows:"J" (±5%), "K" (±10%), "M" (±20%), "N" (±30%), "C" (±0.25 pF), "D" (±0.5 pF), "Z" (+80−20%).

(Tubular type ceramic capacitor is identified by the symbol TV(TQ/CY) of the part NO. VC00TV(TQ/CY)0000000; this TV(TQ/CY) does not mean the lead wire.)

(Tubular type ceramic capacitor is identified by the symbol MF(MN) of the part NO. VC00MF(MN)0000000; this MF(MN) does not mean the lead wire.)

Unless otherwise specified, electrolytic capacitors are ±20% type.

C1,2	VCKYPU1HB102K	J	0.001 μF,50V	A A
C3,4	98F13033610190	J	33 μF,10V,Electrolytic	A B
C5,6	VCKYTV1HB223K	J	0.022 μF,50V	A A
C7,8	VCKYPU1HB331K	J	330 pF,50V	A A
C9	RC-EZB104AF1H	J	0.1 μF,50V,Electrolytic	A B
C10	RC-EZT104AF1H	J	0.1 μF,50V,Electrolytic	A B
C11,12	RC-EZT105AF1H	J	1 μF,50V,Electrolytic	A B
C13,14	RC-EZT107AF0G	J	100 μF,4V,Electrolytic	A B
C15,16	98F1311042514A	J	0.1 μF,25V	A B
C17	98F13010740090	J	100 μF,4V,Electrolytic	A B
C18,19	98F13022763096	J	220 μF,6.3V,Electrolytic	A B
C20	98F1312035019A	J	0.02 μF,50V	A A
C21	VCKYPU1HB102K	J	0.001 μF,50V	A A
C22	RC-EZB105AF1H	J	1 μF,50V,Electrolytic	A B
C23,24	RC-EZT105AF1H	J	1 μF,50V,Electrolytic	A B
C31,32	VCKYTV1EF473Z	J	0.047 μF,25V	A B
C33,34	VCKYTV1HB223K	J	0.022 μF,50V	A A
C35	VCKYPU1HB681K	J	680 pF,50V	A A
C36	VCKYTV1HB681K	J	680 pF,50V	A A
C37,38	98F13010740090	J	100 μF,4V,Electrolytic	A B
			RESISTORS	

(Unless otherwise specified, resistors are ±5%,carbon type.) (Tubular type carbon film resistor ±5% is identified the symbol TV(TQ/CY) of the part NO. VRS−TV(TQ/CY)0000000; this TV(TQ/CY) does not mean lead wire.)

R1,2	VRD-ST2CD121J	J	120 ohms,1/6W [Except for UK and European]	A A
R1,2	VRD-ST2CD181J	J	180 ohms,1/6W [For UK and European]	A A
R3,4	VRD-ST2CD682J	J	6.8 kohms,1/6W	A A
R5,6	VRD-ST2CD683J	J	68 kohms,1/6W	A A
R7,8	VRD-ST2CD104J	J	100 kohm,1/6W	A A
R9,10	VRD-ST2CD222J	J	2.2 kohms,1/6W	A A
R11,12	VRD-ST2CD330J	J	33 ohms,1/6W	A A
R13,14	VRD-ST2CD102J	J	1 kohm,1/6W	A A
R21	VRD-ST2CD222J	J	2.2 kohms,1/6W	A A
R22	VRD-ST2CD821J	J	820 ohms,1/6W	A A
R23	VRD-ST2EER47J	J	0.47 ohms,1/4W	A A
R31,32	VRD-ST2CD273J	J	27 kohms,1/6W	A A
R33	VRD-ST2CD273J	J	27 kohms,1/6W	A A
R34	VRS-TV2AB273J	J	27 kohms,1/10W	A A
R35	VRD-ST2CD224J	J	220 kohms,1/6W	A A
R36	VRS-TV2AB224J	J	220 kohms,1/10W	A A
R37,38	VRS-TV2AB392J	J	3.9 kohms,1/10W	A A
R39	VRD-ST2CD102J	J	1 kohm,1/6W	A A
R40	VRD-ST2CD152J	J	1.5 kohms,1/6W	A A
R41	VRD-ST2CD331J	J	330 ohms,1/6W	A A
R51,52	VRS-TV2AB5R6J	J	5.6 ohms,1/10W [Except for UK and European Only]	A A
			OTHER CIRCUITRY PARTS	
J1	98F16510150201	J	Jack,Headphones	A C
J2	98F16510148402	J	Jack,External DC Power Input	A D
M1	98F00510075000	J	Motor with Pulley	A P
SW1	98F17010038401	J	Switch,Slide Type [X-Bass]	A C
SW2	94R640101149	J	Switch,Leaf Type [Main]	A F
SW3	94R64020205	J	Switch,Slide Type [Direction]	A G
			MECHANICAL PARTS	
1	94R195301301	J	Main Chassis	—
2	94R195301501	J	Sub Chassis	A N
3	94R19530302	J	Plate,Slide	A D
4	94R195307301	J	Arm,Fast Forward	A F
5	94R195308301	J	Arm,Rewind	A F
6	94R19530202	J	Lever,Fast Forward	A C
7	94R19530203	J	Lever,Rewind	A C
8	94R19530204	J	Lever,Stop	A C
11	94R19530201	J	Plate,Hold	A D

REF.NO.	PART NO.	★	DESCRIPTION	CODE
12	94R19530208	J	Spring,Lock Plate	A B
14	94R19530205	J	Plate,Lock	A C
15	94R19530206	J	Plate,Switch	A C
16	94R19530216	J	Collar,Lock Plate	A B
17	94R19530214	J	Spring,Lever	A B
18	94R195305501	J	Gear Arm,Fast Play	A F
19	94R195306501	J	Gear Arm,Rewind Play	A F
20	94R19530504	J	Spring,Gear Arm,Fast Play	A B
21	94R19530604	J	Spring,Gear Arm,Rewind Play	A B
23	94R19530401	J	Panel,Playback Head	A F
24	94R18520404	J	Spring,Pinch Roller,Right	A B
25	94R18520405	J	Spring,Pinch Roller,Left	A B
26	94R18520402	J	Guide,Tape	A C
27	94R18520406	J	Tube	A B
28	94R18520403	J	Spring,Head Azimuth	A B
29	98F20010267900	J	Head,Playback	A T
30	94R19530402	J	Spring,Playback Head Panel	A C
32	94R195309301	J	Pinch Roller Ass'y,Right	A H
33	94R195310301	J	Pinch Roller Ass'y,Left	A H
35	94R19530502	J	Gear Cam,Fast Play	A C
36	94R19530602	J	Gear Cam,Rewind Play	A C
38	94R19531301	J	Pulley,Sub	A B
40	94R19530301	J	Lever,Tape Direction	A B
41	94R19530303	J	Spring,Tape Direction Lever	A B
43	94R195311301	J	Lever,Auto,Right	A G
44	94R195311302	J	Lever,Auto,Left	A G
45	94R195311303	J	Reel Ass'y	A M
46	94R19531107	J	Shaft,Reel Ass'y	A B
49	94R19531601	J	Bracket,Switch	A B
51	94R195312301	J	Flywheel Ass'y	A N
52	94R19531403	J	Belt,Main	A H
54	94R19531407	J	Bracket,Motor	A D
70	94R96940000	J	Screw,ϕ1.7×3.5mm	A A
71	94R96960000	J	Screw,ϕ1.7×4.5mm	A A
72	94R90030000	J	Screw,ϕ2×5mm	A A
73	94R99940000	J	Screw,ϕ2×4mm	A A
74	94R99991304	J	Screw,ϕ1.7×2.2mm	A A
75	94R97620000	J	Screw,ϕ1.7×1.6mm	A A
76	94R99992028	J	Screw,ϕ1.7×3mm	A A
80	94R99990308	J	Washer,ϕ1.85×ϕ5×0.5mm	A A
81	94R99997012	J	Washer,ϕ0.8×ϕ2.4×0.2mm	A A
82	94R99270000	J	Washer,ϕ0.85×ϕ2.8×0.25mm	A A
83	94R99997013	J	Washer,ϕ1.13×ϕ3.6×0.25mm	A A
84	94R99990904	J	Washer,ϕ1.8×ϕ2.45×0.2mm	A A
85	94R99990001	J	Washer,ϕ1.8×ϕ3.2×0.2mm	A A
86	94R99997001	J	Washer,ϕ1.45×ϕ3.2×0.5mm	A A
87	98F19010023100	J	Lug with Wire	A C
88	98F19010052500	J	Shield Coil	A C
M1	98F00510075000	J	Motor with Pulley	A P
SW2	94R640101149	J	Switch,Leaf Type [Main]	A F
SW3	94R64020205	J	Switch,Slide Type [Direction]	A G

CABINET PARTS

101	98F50037350000	J	Cabinet,Front	A F
102	98F50037420000	J	Cabinet,Rear	A E
103	98F52037340000	J	Holder,Cassette	A G
104	98F52037250100	J	Lid, Battery	A B
105	98F55037310100	J	Clip,Belt	A C
106	98F53037360000	J	Window,Cassette Holder	A D
107	98F54037430000	J	Button,Play	A A
108	98F54037440000	J	Button,Fast	A A
109	98F54037450000	J	Button,Fast	A A
110	98F54037460000	J	Button,Stop	A A
111	98F54037470000	J	Knob,Direction	A A
112	98F54037480000	J	Knob,X-Bass	A A
113	98F56037490000	J	Cover,Mechanism	A C
114	98F66010089000	J	Holder,Graphic Equalizer Unit	A C
115	98F76010026000	J	Spacer,PWB	A A
116	98F76010027000	J	Spacer	A A
117	98F73010073700	J	Spring,Cassette Holder	A B
118	98F73010078200	J	Terminal,Battery(+)	A B
119	98F730100430AA	J	Terminal,Battery(-)	A A
120	98F80510026600	J	Label,Specifications [For European]	A B
120	98F80510026601	J	Label,Specifications [For UK]	A B
120	98F80510026602	J	Label,Specifications [Except for European and UK]	A B
121	98F12610119801	J	Graphic Equalizer Unit	A S
122	98F80510026400	J	Label,MADE IN CHINA [For Saudi Arabia Only]	A H
123	98F19010052700	J	Sheet,Earth	A C
601	98F65062170320	J	Screw,ϕ1.7×3mm,Black	A A
602	98F65052170610	J	Screw,ϕ1.7×6mm	A A
603	98F65053200610	J	Screw,ϕ2×6mm	A A
604	98F65052200820	J	Screw,ϕ2×8mm,Black	A A

ACCESSORIES/PACKING PARTS

	98F80010077000	J	Polyethylene Bag,Unit/ Headphones	A A
	98F80210047000	J	Packing Add.	A E
	98F80937400000	J	Warranty Card For UK Only	A B
	98F80937820000	J	Protection Sheet	A A
	98F80937830000	J	Operation Manual	A G
	98F81137840000	J	Packing Case [For UK]	A G
	98F81137840001	J	Packing Case [Except for European and UK]	A G
	98F81137840002	J	Packing Case [For European]	A G
	98F15510159101	J	Headphones [For European and UK]	A N
	98F66010089200	J	Ear Pad	A C
	98F15510158801	J	Headphones [Except for European and UK]	A P
	98F66010089300	J	Ear Pad	A C

P.W.B. ASSEMBLY (Not Replacement Item)

PWB-A	98F00510073500	J	Main [For UK and European]	—
PWB-A	98F00510075500	J	Main [Except for UK and European]	—

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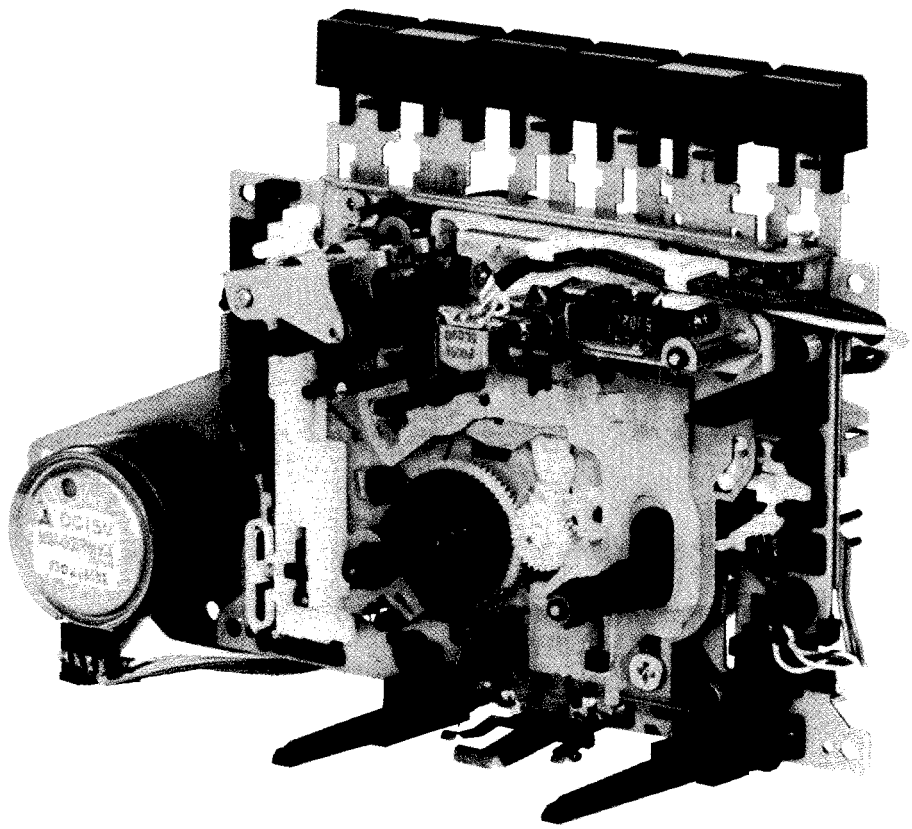
TAPE MECHANISM TEXTBOOK

TWIN MECHANISM



SHARP CORPORATION

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Brief Description of Mechanism Actions

Outline of the mechanism

1. Mechanism T1. This mechanism provides playback alone, but none of fast-forward, rewind, pause, and record operations.
2. Mechanism T2 (functionally the same as the conventional mechanism)

   Record (one record)

   Playback

   Fast-forward

   Rewind

   Stop/eject

   Pause

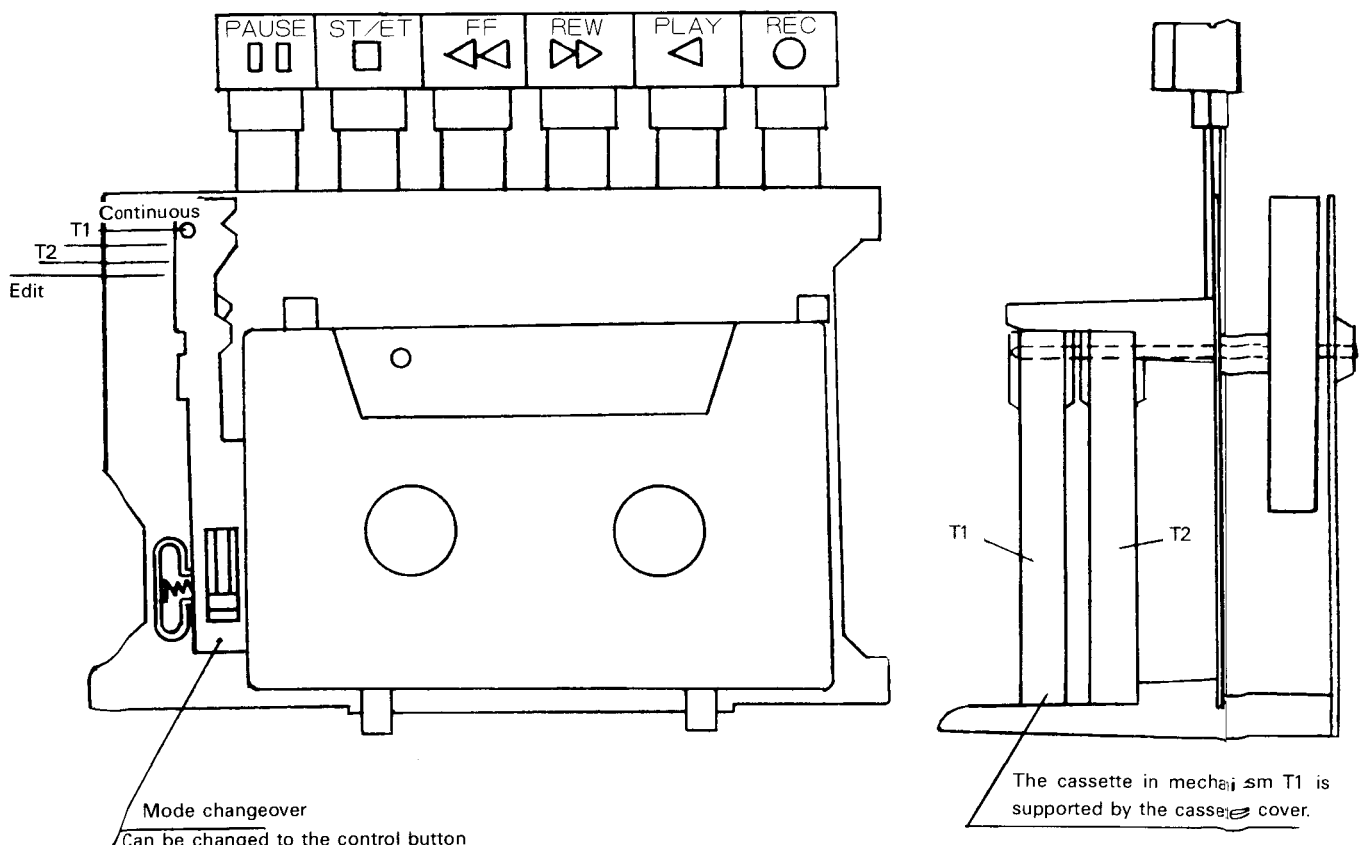
   APSS
3. Both mechanisms T1 and T2 have the automatic stop function (this function can work during recording or playback).
4. 4-step mode changeover (Continuous 1 → 2, T2, T1, and edit)

   1) Continuous: T1 → T2 alone (T2 → T1 is not allowed)

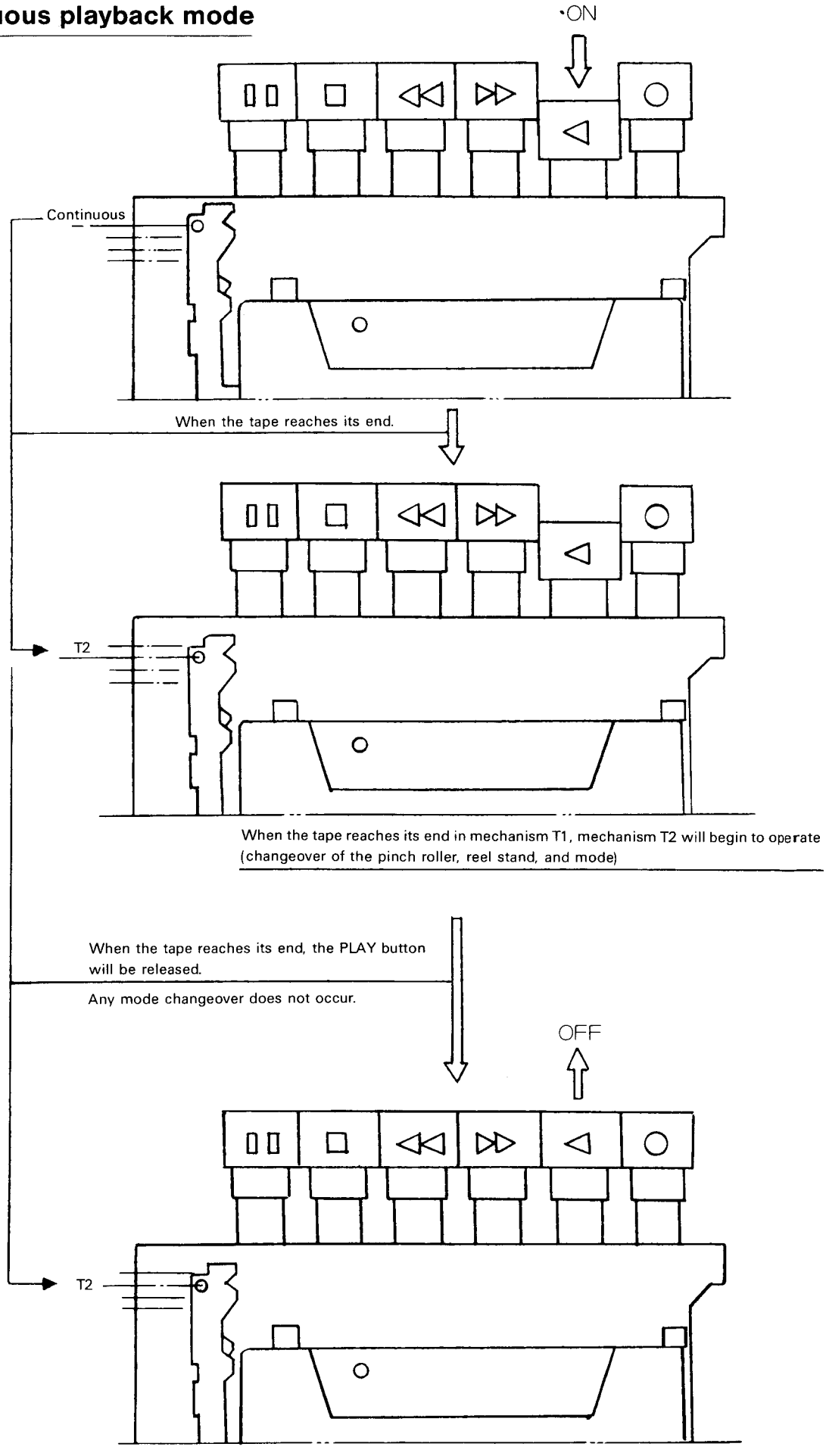
   When the tape reaches its end in mechanism T1, mechanism T2 will start to operate (the mode will be changed to the T2 mode), and when the tape reaches its end in mechanism T2, the PLAY button will be released.

   2) T2/T1: The specified reel stand and pinch roller alone rotate; any part other than these does not rotate.

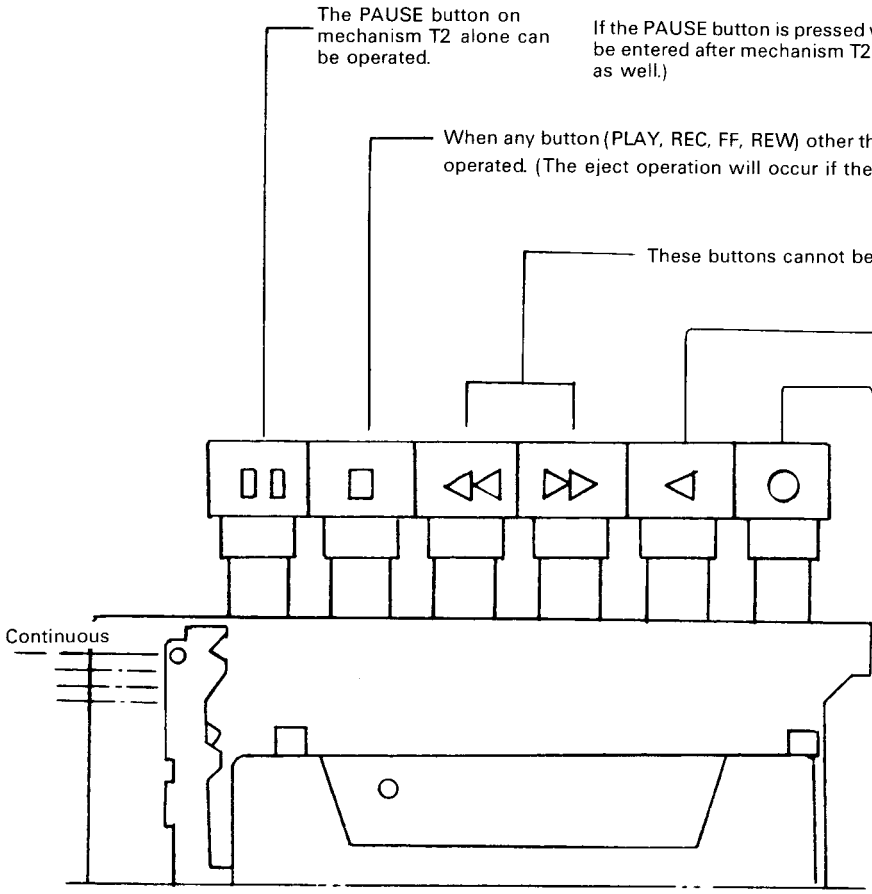
   3) Edit: T1 → T2 alone; when the tape reaches its end in either of mechanisms T1 and T2, the corresponding mechanism will automatically stop.
5. Counter The counter can be mounted only on mechanism T2.



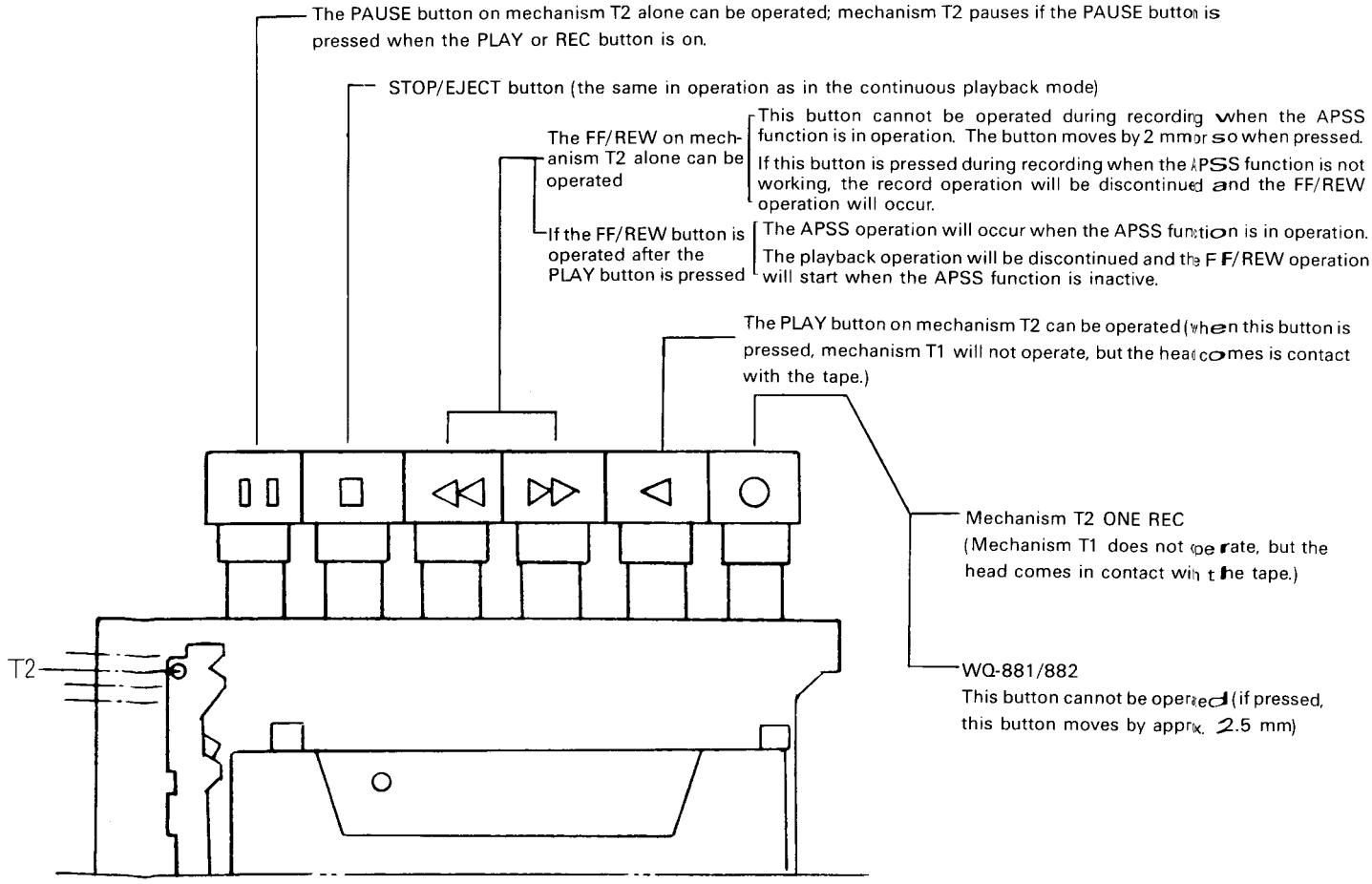
Continuous operation in the continuous playback mode


ON
Continuous
When the tape reaches its end.
T2
When the tape reaches its end in mechanism T1, mechanism T2 will begin to operate (changeover of the pinch roller, reel stand, and mode)
When the tape reaches its end, the PLAY button will be released.
Any mode changeover does not occur.
OFF
T2

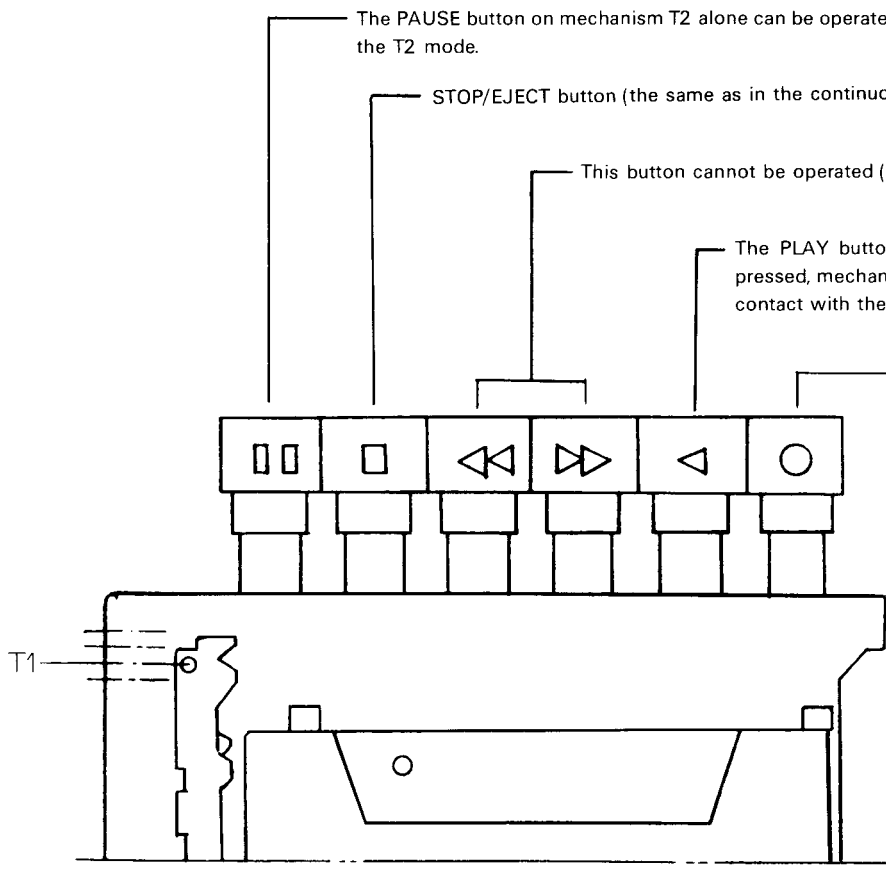
Operation of each button in the continuous playback mode


The PAUSE button on mechanism T2 alone can be operated.
If the PAUSE button is pressed while the PLAY button is on, the PLAY PAUSE state will be entered after mechanism T2 has get ready to operate. (This holds true of recording as well.)
When any button (PLAY, REC, FF, REW) other than the PAUSE button is on, the STOP button can be operated. (The eject operation will occur if the STOP is pressed in the state illustrated below.)
These buttons cannot be pressed (they will move by about 1.5 mm if pressed).
The PLAY button on mechanism T1 can be operated. (Mechanism T2 does not operate. Its head comes in contact with the tape.)
This button cannot be pressed (It will move by about 2.5 mm if pressed).
Continuous

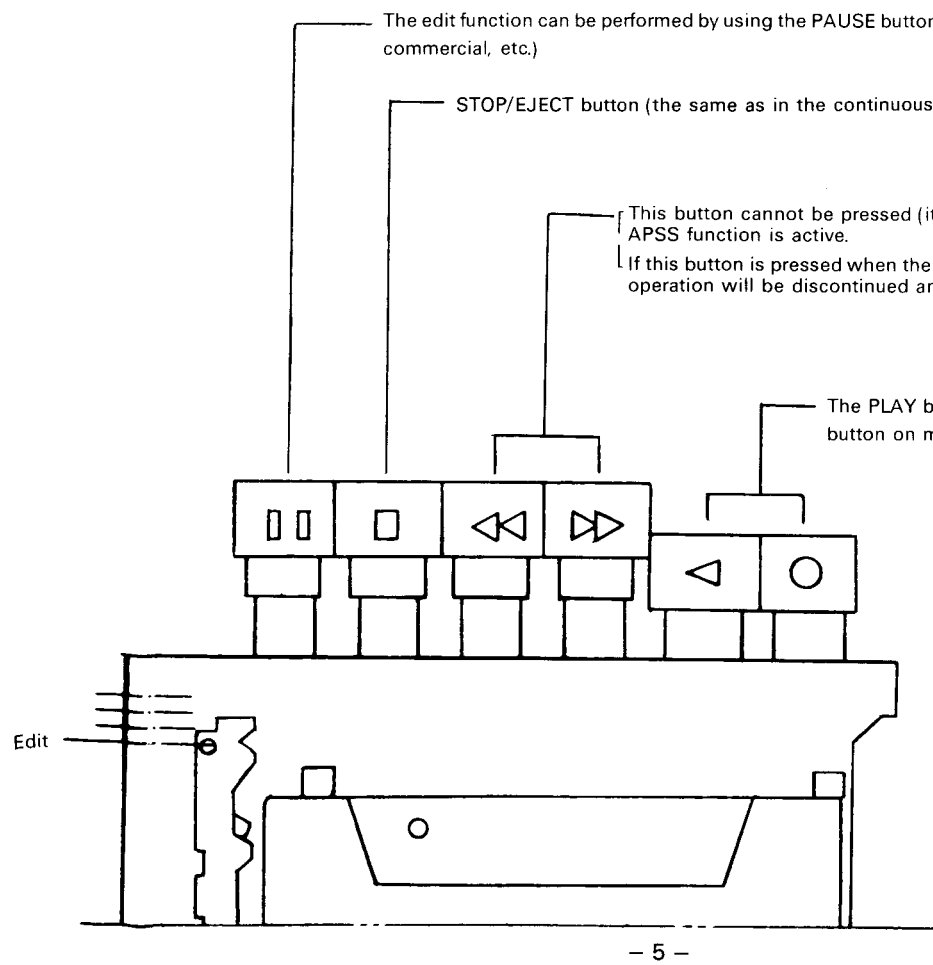
Operation of each button in the T2 mode


The PAUSE button on mechanism T2 alone can be operated; mechanism T2 pauses if the PAUSE button is pressed when the PLAY or REC button is on.
STOP/EJECT button (the same in operation as in the continuous playback mode)
The FF/REW on mechanism T2 alone can be operated
This button cannot be operated during recording when the APSS function is in operation. The button moves by 2 mm or so when pressed.
If this button is pressed during recording when the APSS function is not working, the record operation will be discontinued and the FF/REW operation will occur.
If the FF/REW button is operated after the PLAY button is pressed
The APSS operation will occur when the APSS function is in operation.
The playback operation will be discontinued and the FF/REW operation will start when the APSS function is inactive.
The PLAY button on mechanism T2 can be operated (when this button is pressed, mechanism T1 will not operate, but the head comes is contact with the tape.)
Mechanism T2 ONE REC
(Mechanism T1 does not operate, but the head comes in contact with the tape.)
WQ-881/882
This button cannot be operated (if pressed, this button moves by approx. 2.5 mm)
T2

Operation of each button in the T1 mode

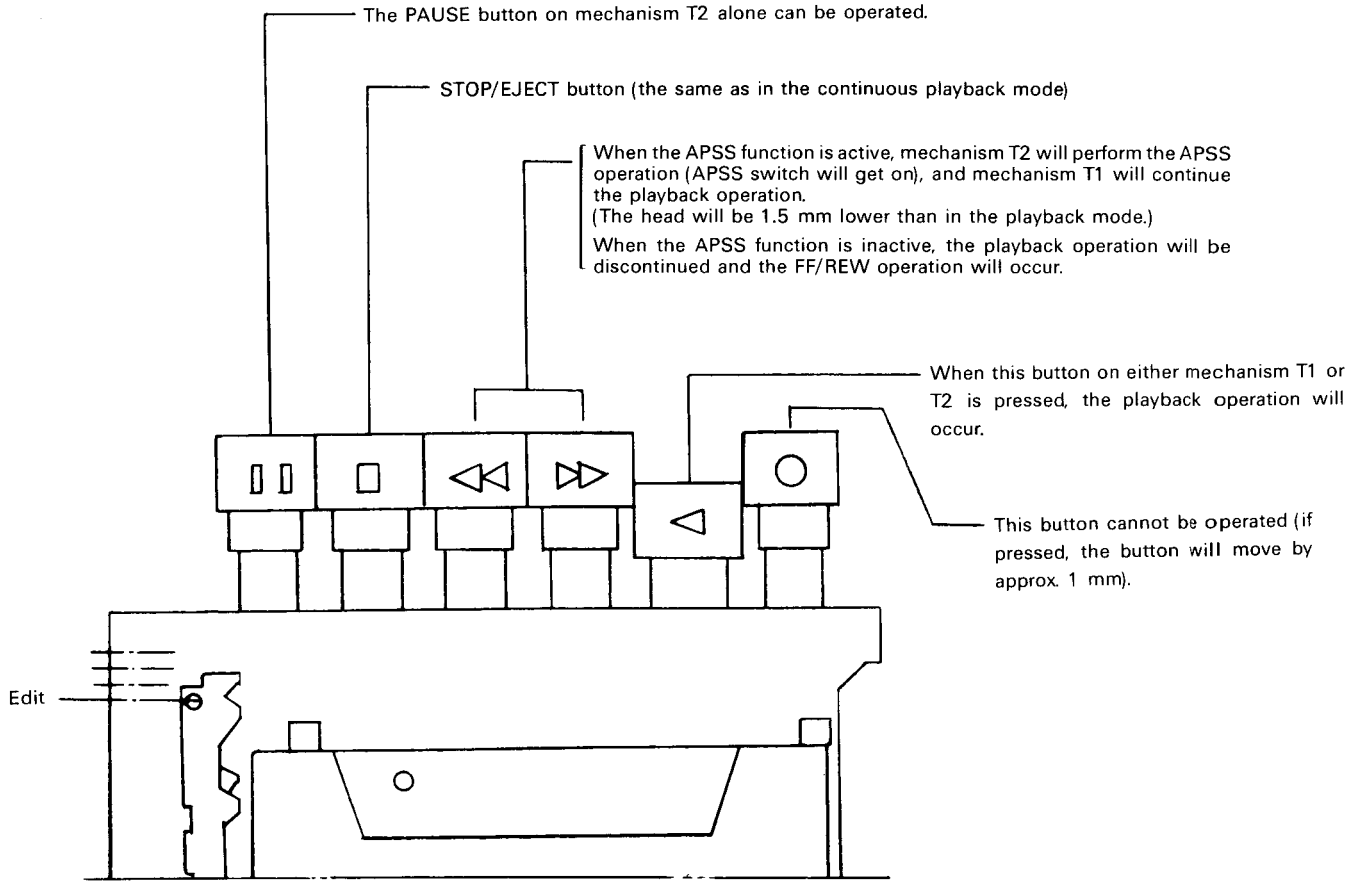

The PAUSE button on mechanism T2 alone can be operated. However, this button is inoperative in the T2 mode.
STOP/EJECT button (the same as in the continuous playback mode)
This button cannot be operated (if pressed, it moves by approx. 1.5 mm)
The PLAY button on mechanism T1 can be operated (when pressed, mechanism T2 does not operate, but the head comes in contact with the tape).
This button cannot be operated (if pressed, it moves by approx. 2.5 mm).
T1

Operation of each button during editing in the edit mode

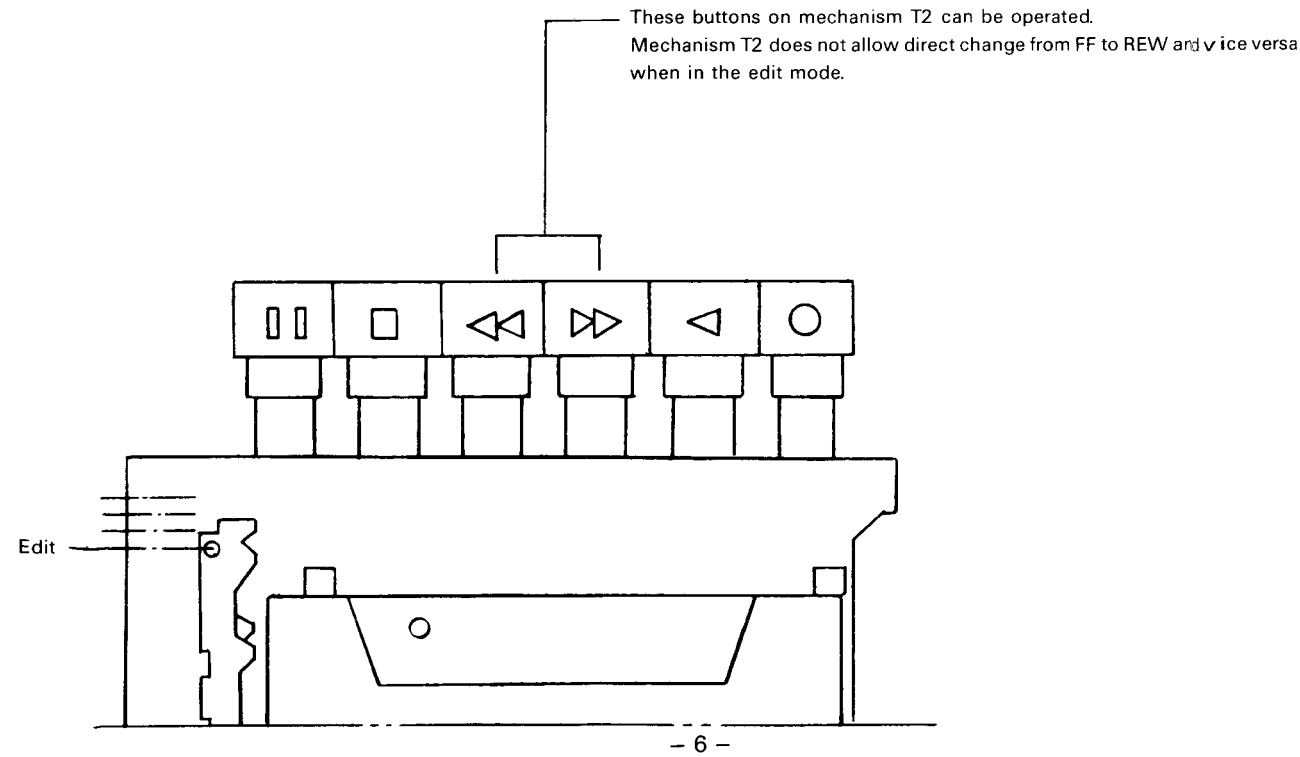

The edit function can be performed by using the PAUSE button in mechanism T2 alone in order to cut commercial, etc.)
STOP/EJECT button (the same as in the continuous playback mode)
This button cannot be pressed (it moves by approx. 2 mm) when the APSS function is active.
If this button is pressed when the APSS function is inactive, the record operation will be discontinued and the FF/REW operation will occur.
The PLAY button on mechanism T1 and the REC button on mechanism T2 can be operated.
Edit

If the tape reaches its end in either mechanism T1 or T2 the corresponding mechanism will automatically stop.

Operation of each button when the PLAY button is being locked in the edit mode


The PAUSE button on mechanism T2 alone can be operated.
STOP/EJECT button (the same as in the continuous playback mode)
When the APSS function is active, mechanism T2 will perform the APSS operation (APSS switch will get on), and mechanism T1 will continue the playback operation.
(The head will be 1.5 mm lower than in the playback mode.)
When the APSS function is inactive, the playback operation will be discontinued and the FF/REW operation will occur.
When this button on either mechanism T1 or T2 is pressed, the playback operation will occur.
This button cannot be operated (if pressed, the button will move by approx. 1 mm).
Edit

Operation of each button in the edit move


These buttons on mechanism T2 can be operated.
Mechanism T2 does not allow direct change from FF to REW and vice versa when in the edit mode.
Edit

Operational Description of the Twin Mechanism

Mode changeover mechanism (1)

First of all, we describe the mode changeover mechanism. Figure 1 depicts what operating state mechanism T1 is in when the mode changeover lever B (50) is in the "continuous mode" position, and Figure 2 does what operating state mechanism T2 is in under the same condition as above.

(Continuous mode)

Mechanism T1 is now in the playback state and mechanism T2 in the stop state. As can be seen from Figure 1, the pinch roller lever T-1 (91) is pressed against the capstan shaft of the flywheel assembly (86) to rotate it; on the other hand, the PLAY lever T1 (88) is engaged with the flywheel assembly (86) and slip roller (81), which causes the rotatory motion of the flywheel assembly to be transmitted to the slip roller assembly, resulting in mechanism T1 being put in the PLAY state. While the mechanism stays in this state, the mode changeover lever B (50) locks neither the pinch roller lever T1 nor the PLAY lever T1.

As can been seen from Figure 2, mechanism T2 does not enter the PLAY state because the mode changeover lever (50) is locking the pinch roller lever T2 (92) and PLAY lever T2 (89) to prevent them from engaging the flywheel assembly (86) and take-up reel stand (82).

Fig. 1

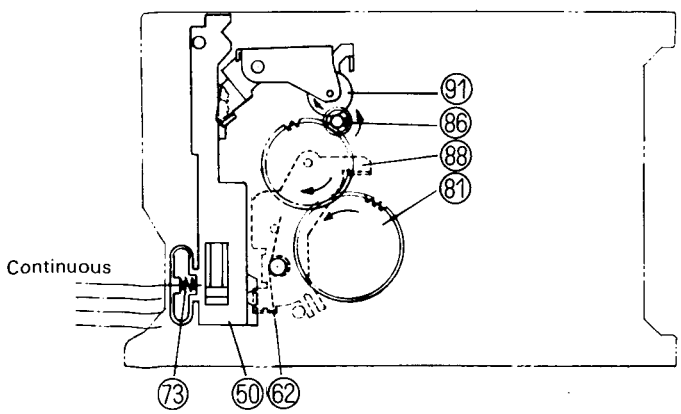
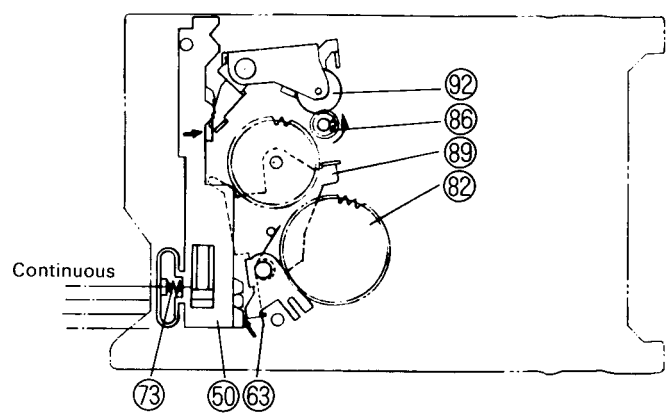


Fig. 2



Mode changeover mechanism (2)

(T2 mode)

Figures 3 and 4 represent the states of mechanisms T1 and T2 that are experienced when the mode changeover lever B (50) is set to the "T2 mode" position, respectively.

These states are the reverse of those states that are shown in Figures 1 and 2. That is, mechanism T2 is in the PLAY state and mechanism T1 in the STOP state.

In the T1 mode the rotatory motion of the flywheel assembly is transmitted in the same manner as in the continuous mode.

(Edit mode)

Figures 5 and 6 depict the states of mechanisms T1 and T2 that are experienced when the mode changeover lever B (50) is set to the "edit mode" position, respectively. As can be seen from these figures, both mechanisms T1 and T2 are in the PLAY state because the lever locks neither of them in the edit mode.

As can be seen from the above description, the set can be put in the "continuous", "T1", "T2", or "edit" mode by manipulating the mode changeover lever B (50).

Fig. 3 (T1)

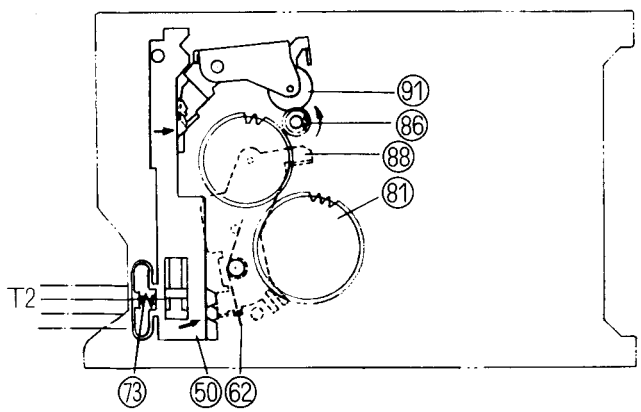


Fig. 4 (T2)

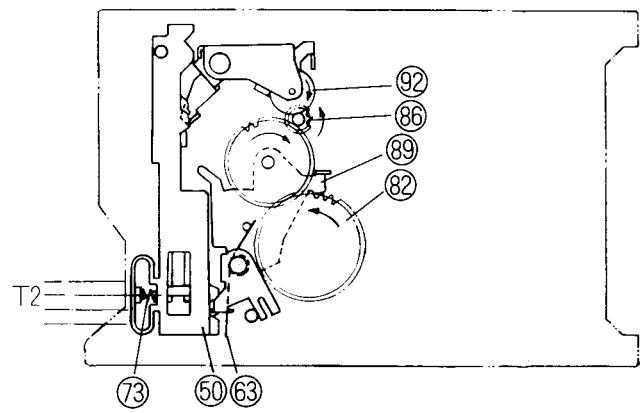


Fig. 5 (T1)

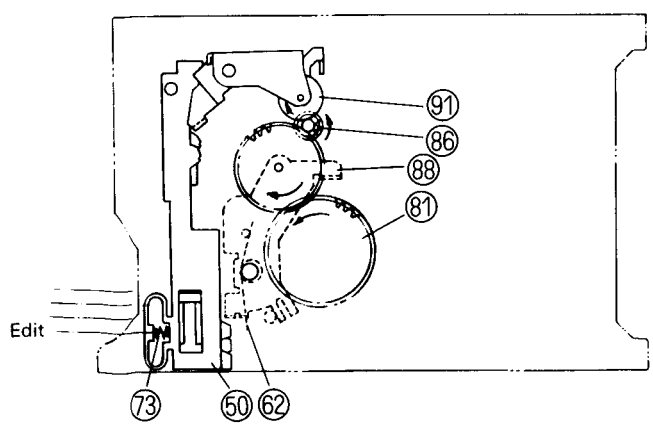
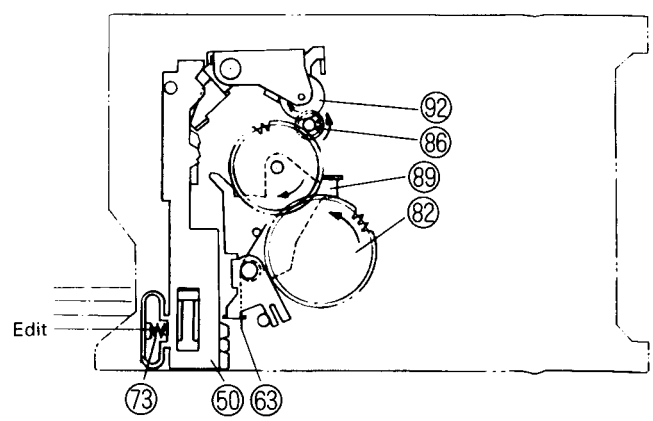


Fig. 6 (T2)



Automatic changeover ("continuous" mode to "T2" mode)

We describe here the automatic changeover from the "continuous" mode to the "T2" mode, using Figures 7, 8, and 9.

In Figure 7 the PLAY lever(29) is maintained in the PLAY state by the main lock plate B(38). The mode changeover lever B(50) (which is shown in Figure 8), being in the "continuous mode" position, pushes the select lever(36), resulting in the states shown in Figures 7 and 8 being experienced. When the tape in the dummy cassette is entirely taken up (or reaches its end), the trigger lever(30) is rotated in the direction of the arrow shown in Figure 7.

(As seen from Figure 21, when the tape reaches its end, the sensor guide(44) is pushed to cause the T1 sensor contact plate(11) to push the stop coupling lever (27), resulting in the trigger lever (30) being rotated.)

At this time, the auto stop cam(24) is rotated by the flywheel assembly(86) because the trigger lever(30) is unlocked (see Figure 9) by the lock release lever spring(69) that actuates the lock release lever(46). Accordingly, the lock release lever moves in the direction of arrow A (see Figure 8), causing the mode changeover lever B (50) to shift from the "continuous mode" position to the "T2 mode" position. On the other hand, the select lever(36) staying on the lock release lever(46) has no positional relation with the main lock plate B(38). This causes the PLAY lever to maintain its position, resulting in the automatic changeover from the "continuous" mode to the "T2" mode being achieved. If the mode changeover lever B(50) is moved, mechanisms T1 and T2 change from the states shown in Figures 1 and 2 to those shown in Figures 3 and 4, respectively.

Fig. 7

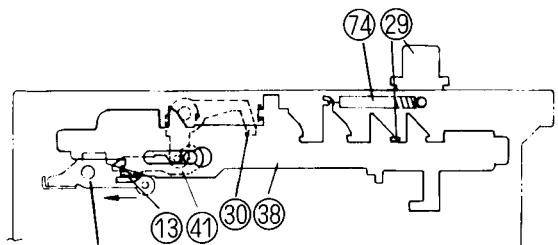


Fig. 8

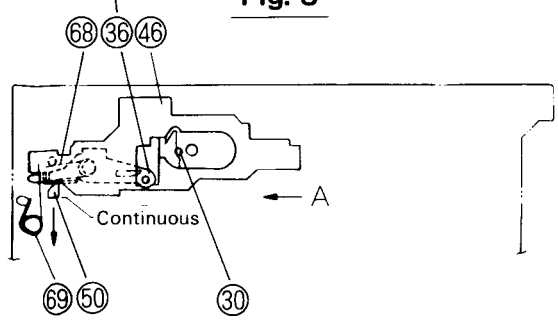
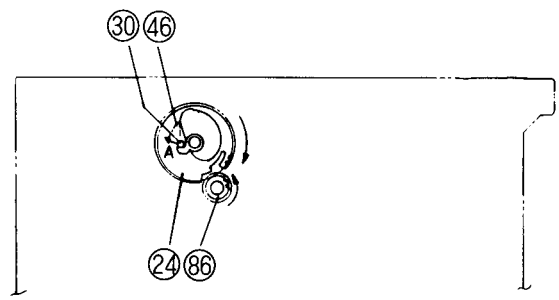


Fig. 9



Automatic stop mechanism

Using Figures 10 and 11, we describe hereunder how the automatic stop mechanism works in the "T1", "T2", or "edit" mode. In Figures 10 and 11, the mode changeover lever B (50) is not pushing the select lever (36). Accordingly, the automatic stop mechanism enters the state shown in Figure 11 due to the force of the select lever spring (68).

When the tape reaches its end, the trigger lever (30) is actuated, causing the automatic stop mechanism to be put in the state shown in Figure 10. (In mechanism T2 the sensor chip (45) pushes the stop continue lever (27) as shown in Figure 21.)

The trigger lever (30) pushes the start interrupt lever (41), which pushes back the select lever (36) in the reverse of the direction in which the spring (68) acts, causing the select lever to arrive at the position that enables it to come in contact with the main lock plate B (38). Also, since the automatic stop cam (24) is rotated by the flywheel assembly (86), the lock release lever (46) moves in the direction of arrow A, which causes the select lever (36) to pull the main lock plate B (38) and thus unlocks the PLAY lever (29), resulting in the automatic stop mechanism being put in action. The function of the start interrupt lever is to hold the select lever (36) in the position where the lever is to pull the main lock plate B (38) until the lever comes in contact with the lock plate B.

Fig. 10

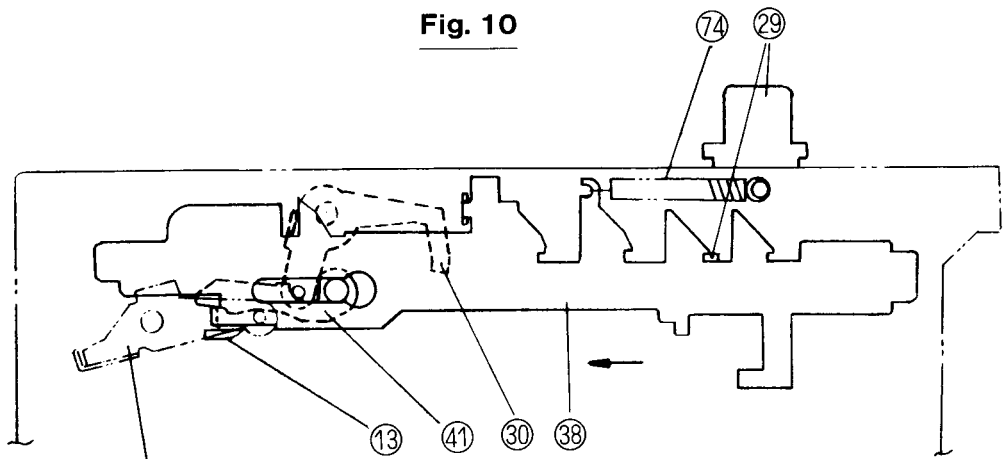
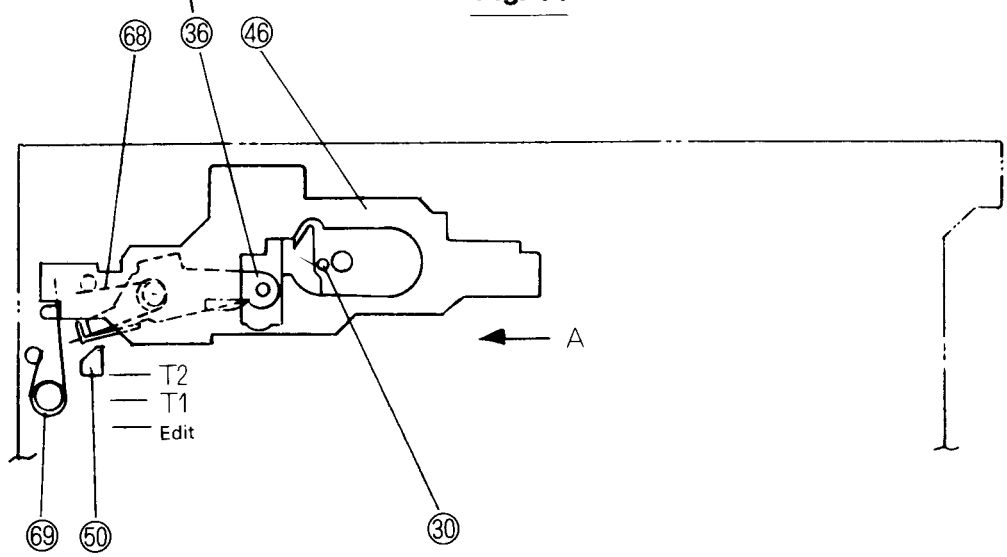


Fig. 11



Head holding mechanism

We describe here the head holding mechanism, using Figure 12. Figure 12 shows the plan view and side view of the head. For other parts, see Figure 21.

On the subchassis (14) are situated the playback head (95) of mechanism T1 and the recording/playback head (96) and erasing head (94) of mechanism T2. The head holding mechanism for mechanism T1 and that for mechanism T2 are mounted in the block, and which of the two head holding mechanisms is in action is detected by the mode changeover switch 503 according to the position of the mode changeover lever B (50). The playback head (95) and recording/playback head (96) are standard in shape; and they are designed to allow the azimuth adjustment to be made individually.

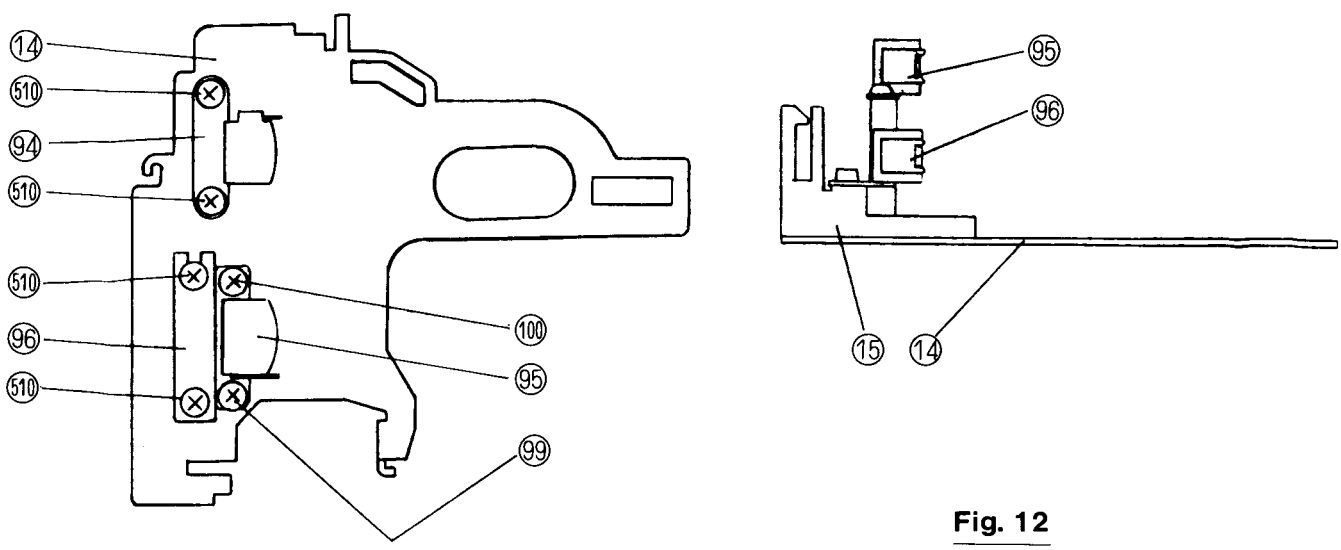


Fig. 12

Two-step reel stand mechanism

We describe here the two-step reel stand mechanism, using Figure 13. A is the take-up side, and B the supply side.

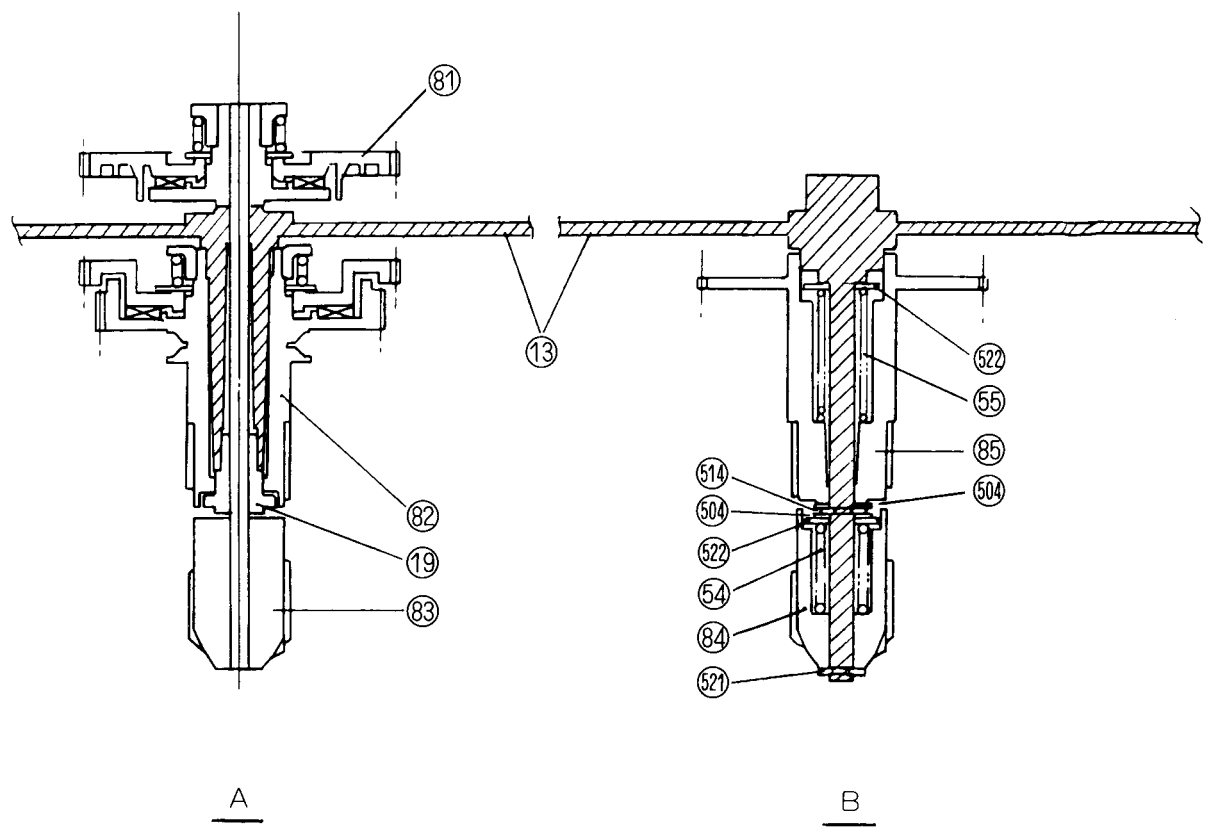
On the take-up side the take-up reel stand (82) is held on the main chassis assembly (13) by the retainer R (19) so that the stand can rotate freely. The take-up reel stand (82) is internally provided with a slip mechanism; and it can take up the tape at a specified torque.

The slip roller assembly (81) is being pressed into the take-up reel cap (83), so that they can rotate together beared by the main chassis assembly (13) and retainer (R) 19.

The slip roller assembly (81) is equipped with a slip mechanism like the take-up reel stand (82) and can take up the tape in mechanism T1. Since both mechanisms T1 and T2 are individually equipped with a slip mechanism and do not affect each other, each mode of the mode changeover mechanism can function.

B is the supply side, where the two BT washers (522), back tension T2 spring (55), supply reel stand (85), two T1 BT washers (504), E-15 (514), back tension T1 spring (54), supply reel cap (84), and stop washer (521) are incorporated as shown below, so that mechanisms T1 and T2 can rotate independently.

Fig. 13



Operation interrupt mechanism

We describe here the operation interrupt mechanism, using Figures 14 and 15. Figure 14 shows what state the operation interrupt mechanism is in when the mode changeover lever B (50) is in the "continuous mode" position, and Figure 15 does what state that same mechanism is in when the lever is in the "T2 mode" position. As seen from Figure 14, when the mode changeover lever B (50) is in the "continuous mode" position, the interrupt lever (37) is put in the state shown below by the interrupt lever spring (70). At this time the interrupt lever (37) is located in the positions indicated by the arrows, preventing the REC lever (31), REW lever (36), and FF lever (33) from being operated. As seen from Figure 15, when the mode changeover lever B (50) is in the "T2 mode" position, the interrupt lever (37) is shifted to the right as illustrated and held there by the interrupt lever spring (70). In this state the stoppers of the interrupt lever (37) are situated in the elliptical holes in the REC, REW, and FF levers, allowing these levers to be operated. In this way the operation of the REC, REW, and FF levers is interrupted by the interrupt lever (37) that shifts in response to the positional change of the mode changeover lever B (50).

Fig. 14

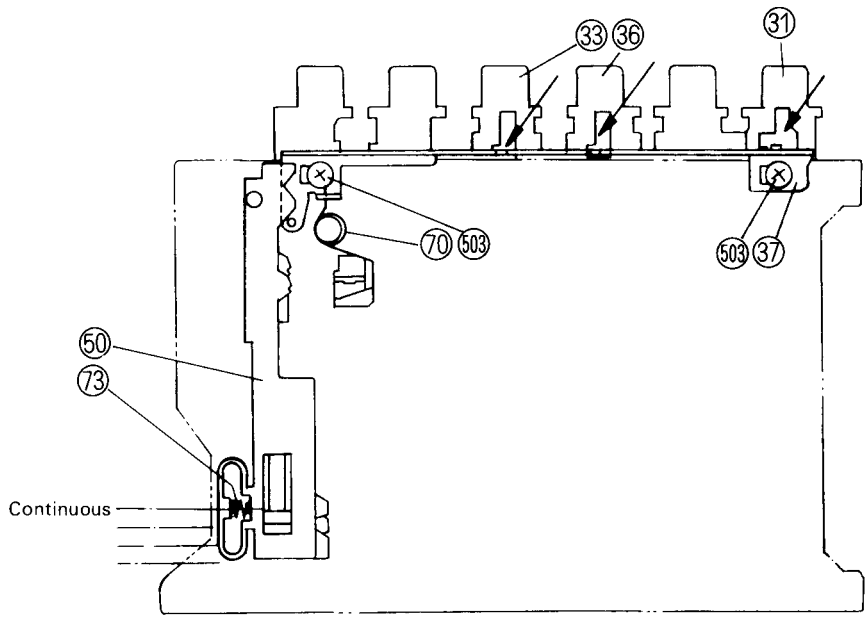
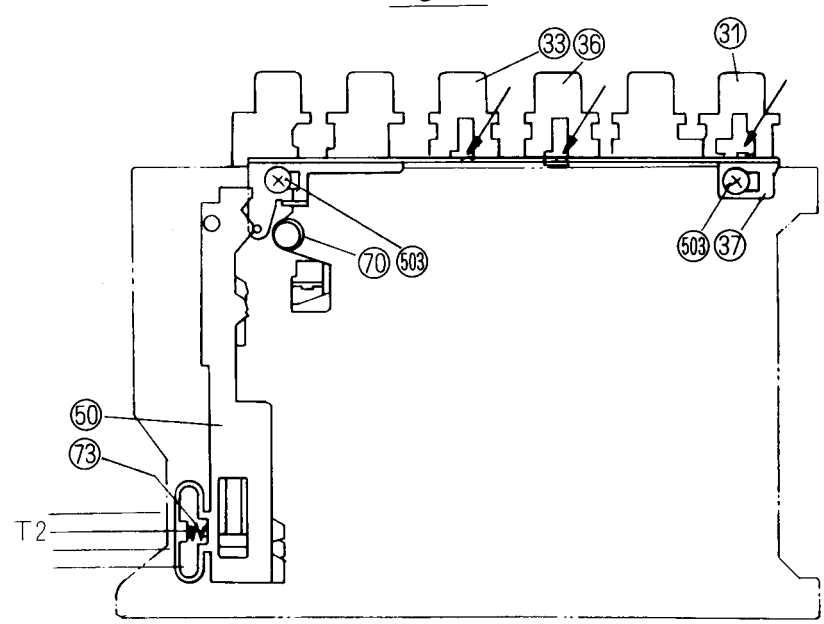


Fig. 15



FF/REW mechanism

Figure 16 shows the mechanism in the FF state, and Figure 17 does the mechanism in the REW state.

If the FF lever (33) is pushed, the F/R lever (43) starts to rotate, causing the F/R roller assembly (90) coupled with the F/R lever to engage the flywheel assembly (86) and take-up reel stand (82). This causes the rotatory motion of the flywheel assembly to be transmitted to the take-up reel stand, resulting in the mechanism entering the FF state shown in Figure 16. (This state is held by the main lock plate B (38). See Figure 22.)

On the other hand, when teh F/R roller assembly (90) engages the F/R intermediate gear (87) and flywheel assembly (86), the supply reel stand (85) starts to rotate, putting the mechanism in the REW state shown in Figure 17. As mentioned above, the rotation of the F/R lever (43) puts the mechanism in the FF or REW state. The FF or REW operation is permitted only in the "T2" or "edit" mode, and the direct change from FF to REW and vice versa cannot be achieved.

Fig. 16

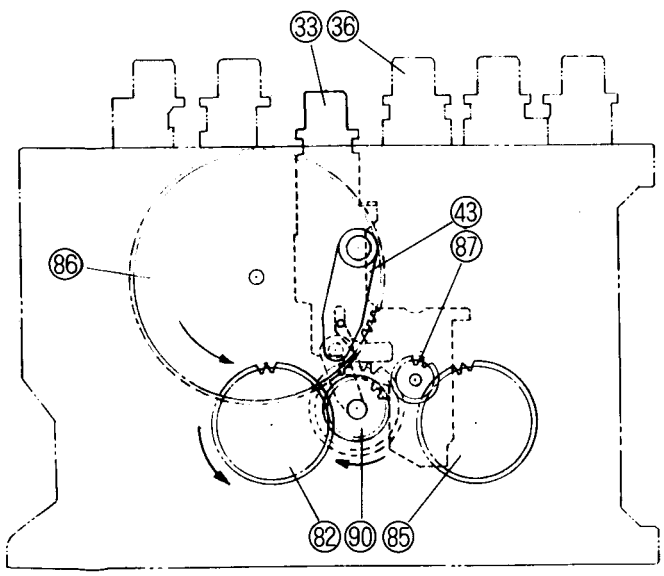
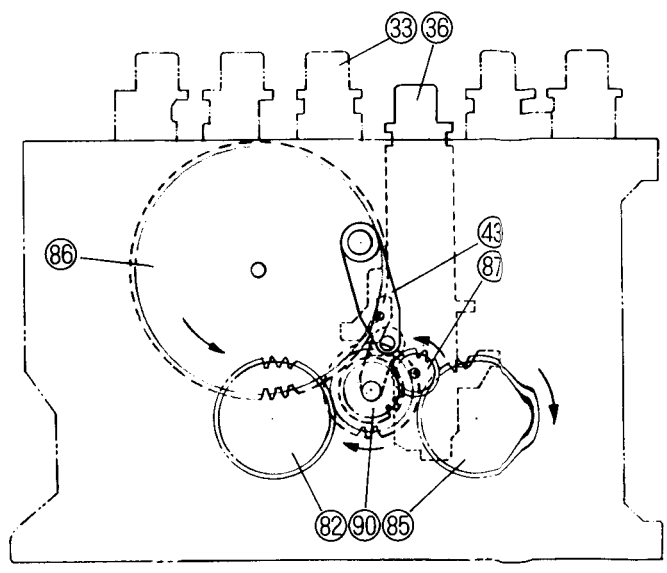


Fig. 17



APSS mechanism

Figure 18 shows the PLAY state that is experienced in the T2 mode, and Figure 19 does the APSS state.

(In Figures 18 and 19 are shown only those parts, needed to explain the APSS mechanism. For other parts, see Figures 21 and 22.)

When the PLAY lever (29) is pressed, it pushes the pinch roller lever T2 (92). This causes the lever to come in tight contact with the capstan shaft, resulting in the shaft being rotated. On the other hand, the PLAY lever T2 (89) engages the take-up reel stand (82) to rotate it, resulting in the state shown in Figure 18 being entered. If the REW lever (36) is pressed in this state, it rotates the play cancel lever (28), which causes the pinch roller lever T2 (92) to leave the capstan shaft and the PLAY lever T2 (89) to leave the flywheel assembly (86) and take-up reel stand (82), resulting in the take-up reel stand being stopped.

On the other hand, since the play cancel lever (28) rotates the APSS Lever (49), the subchassis (14) is pushed back toward the STOP position by the length L. Also, the rotation of the APSS lever turns on the subchassis switch (502), which causes the REW lever (36) to be attracted and held by the DC solenoid (501), resulting in the REW state being entered as explained in the item "FF/REW mechanism".

If the PLAY state is cancelled and the head (which is situated on the subchassis (14)) is lowered in this way, the pad pressure declines, causing the tape to run at a high speed.

If any gap is detected on the tape by the gap detector circuit (which is turned on by the subchassis switch 502), the energization of the DC solenoid 501 is interrupted and thus the REW lever (36) returns to its original position, resulting in the PLAY state being resumed.

The same action as above occurs when the FF lever (33) is pressed in the PLAY state. The subchassis switch 502 is designed to be turned on by the groove in the subchassis (14) only when the APSS mode is entered.

Fig. 19

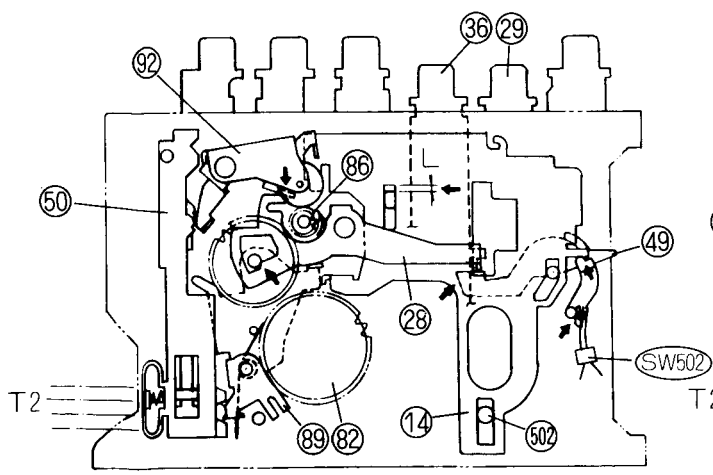
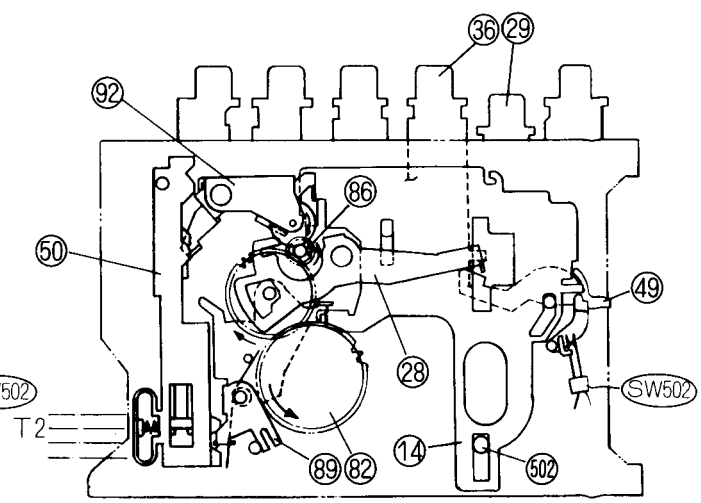


Fig. 18



Cassette holding mechanism

We describe here the cassette holding mechanism, using Figure 20.

In Figure 20 two dummy cassettes for mechanisms T1 and T2 are installed one over the other. When loaded, however, they need to be inserted in parallel with each other.

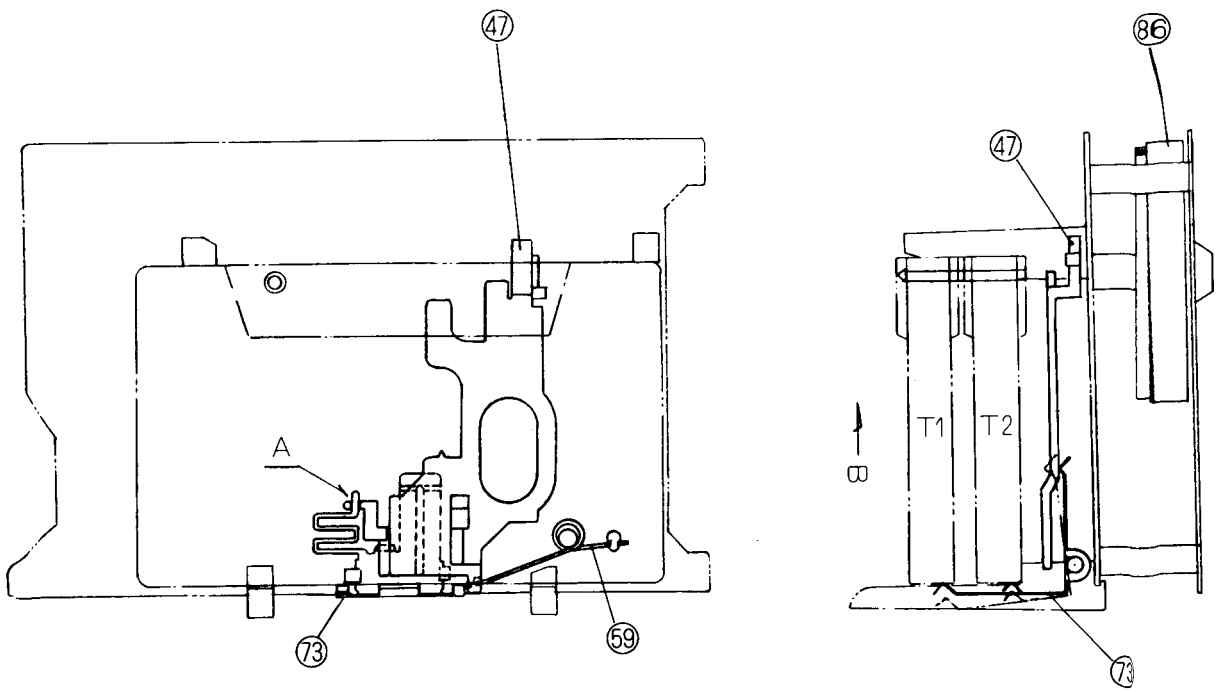
Accordingly, if the cassettes are inserted with the cassette holding spring being sagged as before, there arises an operational problem when the cassettes are removed or inserted.

The cassette holding mechanism is designed to allow the cassette holding spring to act only when the set is in operation.

The cassette holding spring (73) stays in the state due to the spring-like action of part A. The brake lever (47) is allowed to move when any of the PLAY lever (29), REW lever (36), and FF lever (33) is operated. When the brake lever moves, its inclined part rotates the cassette holding spring (73), which presses the dummy cassette.

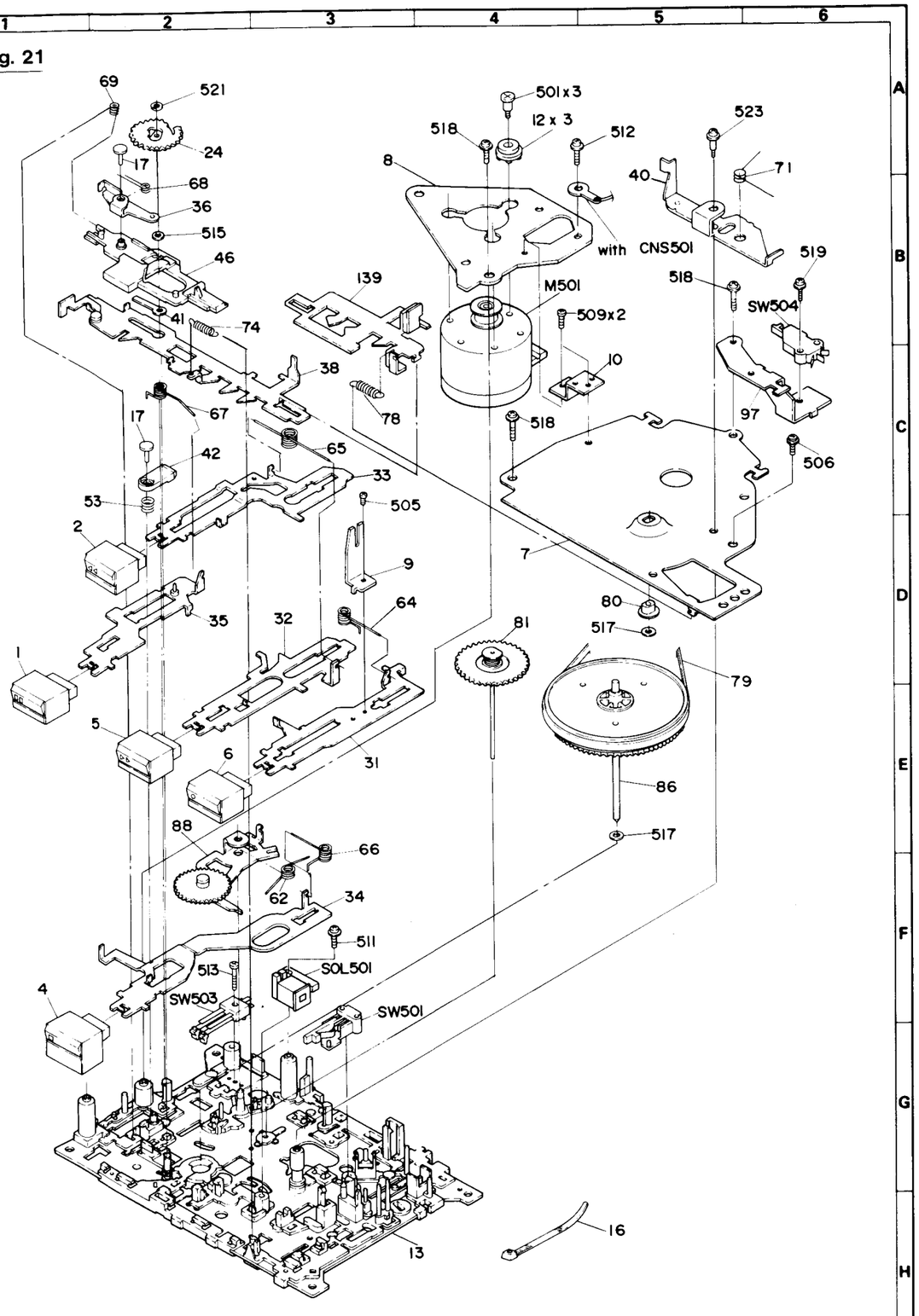
This means that the dummy cassette is pressed in the direction of arrow B when the PLAY, FF, REW, or APSS state is entered.

Fig. 20



Exploded View of the Mechanism

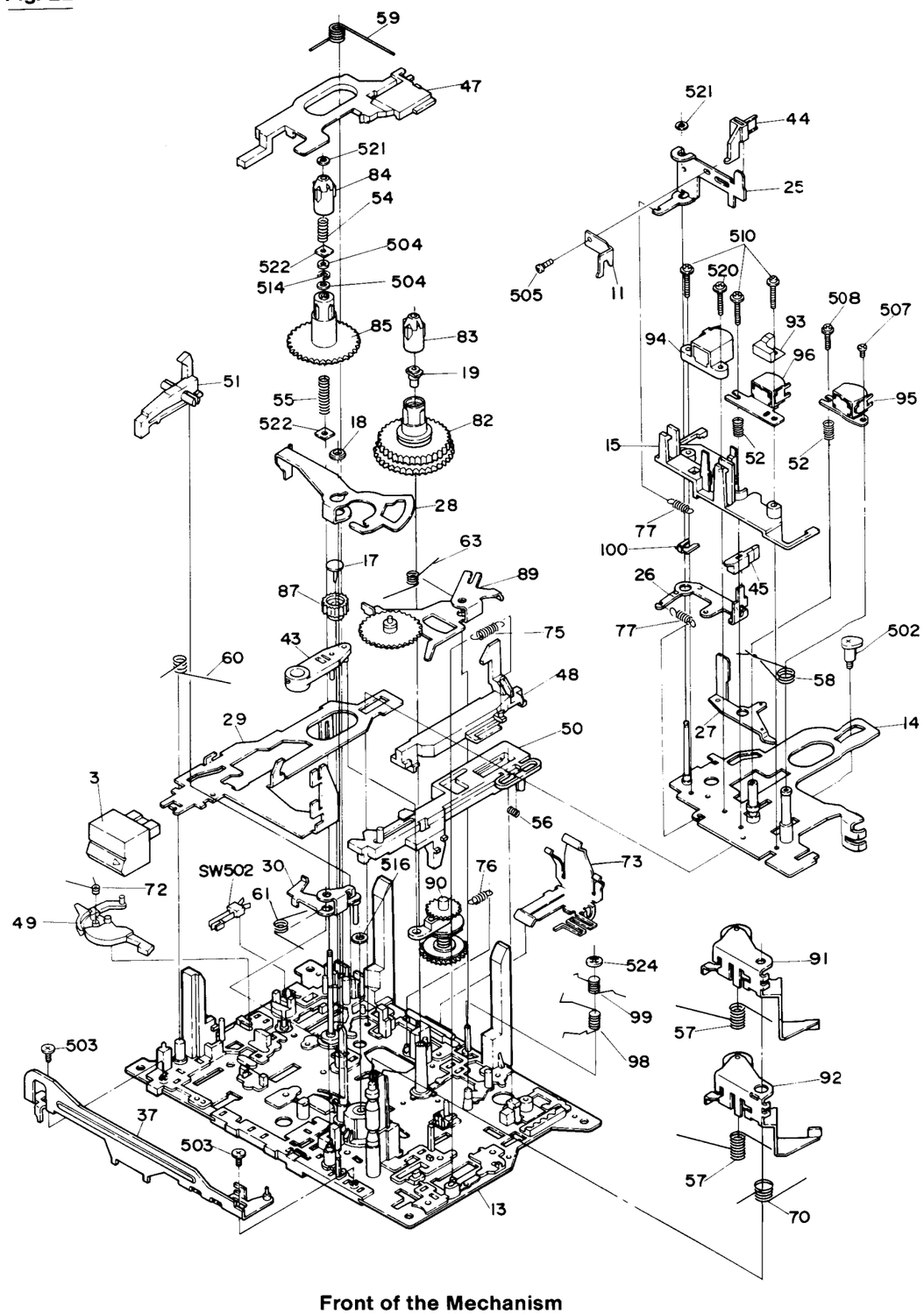
Fig. 21



Back of the Mechanism

■ Exploded View of the Mechanism

Fig. 22



Front of the Mechanism